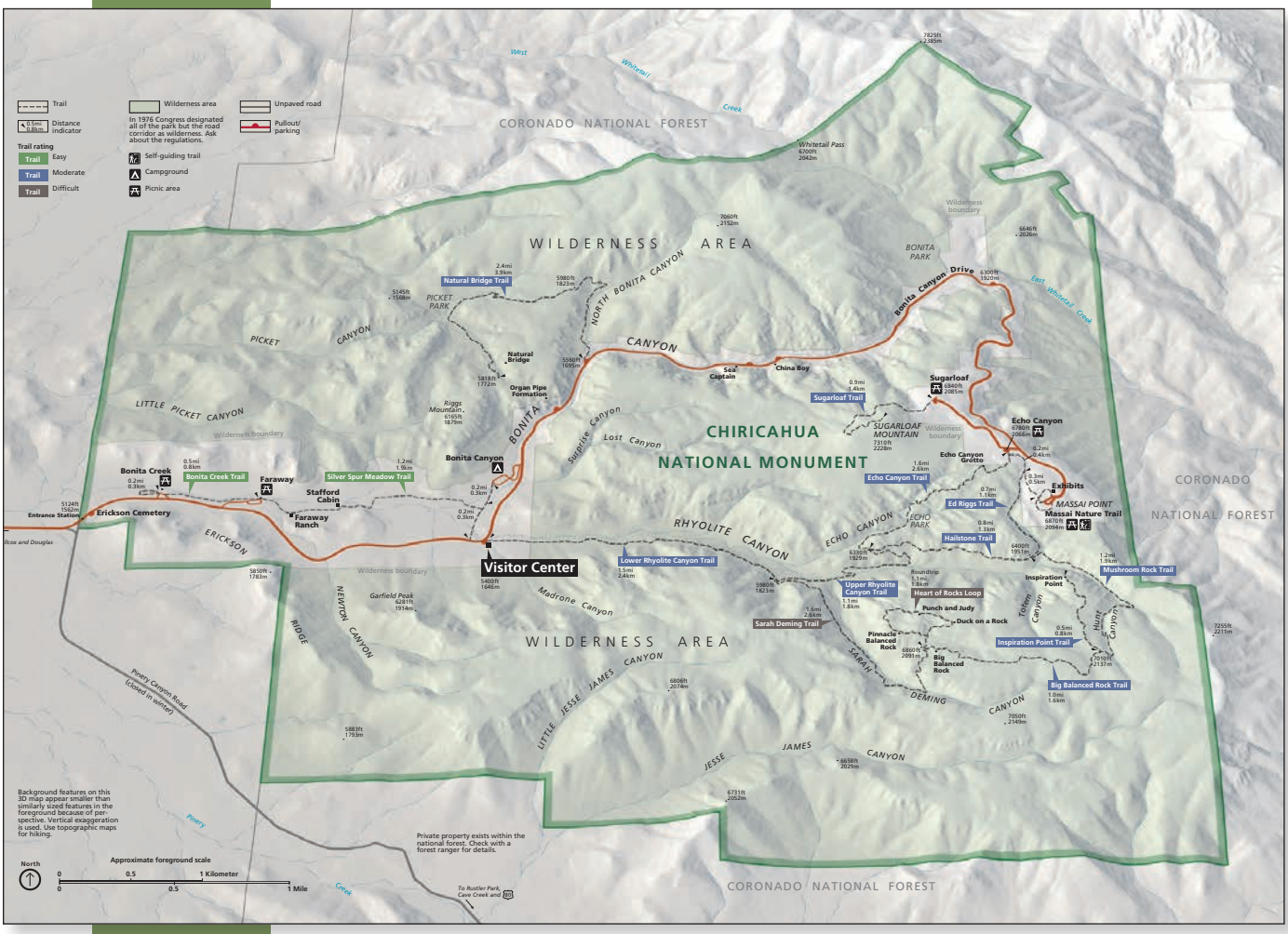
NATIONAL PARK SERVICE • U.S. DEPARTMENT OF THE INTERIOR

# Foundation Document

## Chiricahua National Monument

Arizona

January 2016


CORONADO NATIONAL FOREST
WILDERNESS AREA
CHIRICAHUA NATIONAL MONUMENT
Visitor Center
Bonita Canyon Drive
Natural Bridge Trail
Bonita Creek Trail
Silver Spur Meadow Trail
Sugarloaf Trail
Echo Canyon Trail
Ed Riggs Trail
Hailstone Trail
Lower Rhyolite Canyon Trail
Upper Rhyolite Canyon Trail
Heart of Rocks Loop
Sarah Deming Trail
Inspiration Point Trail
Big Balanced Rock Trail
Mushroom Rock Trail
Massai Point Trail
Erickson Cemetery
Faraway Ranch
Stafford Cabin
Pinery Canyon Road (Closed in winter)
Private property exists within the national forest. Check with a forest ranger for details.
Background features on this 3D map appear smaller than similarly sized features in the foreground because of perspective. Vertical exaggeration is used. Use topographic maps for hiking.
Approximate foreground scale
North


North
0 10 Km
0 10 Mi
To Safford
Bowie
San Simon
Willcox
Apache Pass
Saguaro National Park
Chiricahua National Monument
Fort Bowie National Historic Site
To Tucson
Benson
DRAGON MTNS
CHIRICAHUA MTNS
Portal
Sunizona
Pinery Canyon Rd
Turkey Creek Rd
Tombstone
To Nogales
CORONADO NATIONAL FOREST
Sierra Vista
McNeal
Coronado National Memorial
Bisbee
Douglas
Agua Prieta
U.S. MEXICO
NEW MEXICO
ARIZONA

# Contents

# Mission of the National Park Service

The National Park Service (NPS) preserves unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations. The National Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

The NPS core values are a framework in which the National Park Service accomplishes its mission. They express the manner in which, both individually and collectively, the National Park Service pursues its mission. The NPS core values are:

- **Shared stewardship**: We share a commitment to resource stewardship with the global preservation community.
- **Excellence**: We strive continually to learn and improve so that we may achieve the highest ideals of public service.
- **Integrity**: We deal honestly and fairly with the public and one another.
- **Tradition**: We are proud of it; we learn from it; we are not bound by it.
- **Respect**: We embrace each other's differences so that we may enrich the well-being of everyone.

The National Park Service is a bureau within the Department of the Interior. While numerous national park system units were created prior to 1916, it was not until August 25, 1916, that President Woodrow Wilson signed the National Park Service Organic Act formally establishing the National Park Service.

The national park system continues to grow and comprises more than 400 park units covering more than 84 million acres in every state, the District of Columbia, American Samoa, Guam, Puerto Rico, and the Virgin Islands. These units include, but are not limited to, national parks, monuments, battlefields, military parks, historical parks, historic sites, lakeshores, seashores, recreation areas, scenic rivers and trails, and the White House. The variety and diversity of park units throughout the nation require a strong commitment to resource stewardship and management to ensure both the protection and enjoyment of these resources for future generations.


*The arrowhead was authorized as the official National Park Service emblem by the Secretary of the Interior on July 20, 1951. The sequoia tree and bison represent vegetation and wildlife, the mountains and water represent scenic and recreational values, and the arrowhead represents historical and archeological values.*

# Introduction

Every unit of the national park system will have a foundational document to provide basic guidance for planning and management decisions—a foundation for planning and management. The core components of a foundation document include a brief description of the park as well as the park's purpose, significance, fundamental resources and values, and interpretive themes. The foundation document also includes special mandates and administrative commitments, an assessment of planning and data needs that identifies planning issues, planning products to be developed, and the associated studies and data required for park planning. Along with the core components, the assessment provides a focus for park planning activities and establishes a baseline from which planning documents are developed.

A primary benefit of developing a foundation document is the opportunity to integrate and coordinate all kinds and levels of planning from a single, shared understanding of what is most important about the park. The process of developing a foundation document begins with gathering and integrating information about the park. Next, this information is refined and focused to determine what the most important attributes of the park are. The process of preparing a foundation document aids park managers, staff, and the public in identifying and clearly stating in one document the essential information that is necessary for park management to consider when determining future planning efforts, outlining key planning issues, and protecting resources and values that are integral to park purpose and identity.

While not included in this document, a park atlas is also part of a foundation project. The atlas is a series of maps compiled from available geographic information system (GIS) data on natural and cultural resources, visitor use patterns, facilities, and other topics. It serves as a GIS-based support tool for planning and park operations. The atlas is published as a (hard copy) paper product and as geospatial data for use in a web mapping environment. The park atlas for Chiricahua National Monument can be accessed online at: http://insideparkatlas.nps.gov/.

# Part 1: Core Components

The core components of a foundation document include a brief description of the park, park purpose, significance statements, fundamental resources and values, and interpretive themes. These components are core because they typically do not change over time. Core components are expected to be used in future planning and management efforts.

## Brief Description of the Park

Located in the Sky Island region of southeast Arizona, Chiricahua National Monument (referred to in this document as "park") was established by President Calvin Coolidge in 1924 for the purpose of protecting distinctive geologic features known as "the Pinnacles." Rising hundreds of feet into the air, these eroded rhyolite columns and other formations are evidence of violent geological activity that continued for millions of years. Volcanic activity, faulting, weathering, and erosion resulted in the formation of pinnacles, spires, balanced rocks, and canyons. Two major canyons (Bonita and Rhyolite) drain into the lower section of the park from the wild and mountainous backcountry. These exceptional geologic resources are situated in a scenic, forested setting that is remarkable for its rich biodiversity and for cultural resources documenting thousands of years of human history.

The park supports a diverse assemblage of plant communities, including pine stands, oak woodlands, and manzanita fields, along with lush riparian vegetation along canyon bottoms. The Chiricahua Mountains are in the Basin and Range Biogeographical Province and are one of Arizona's "sky island" mountain ranges—so named because they, and the plants and animals that they support, are separated from similar "islands" by intervening valleys of grassland and desert. Averaging 10 to 40 miles wide, these expansive valleys act as barriers to movement for certain woodland and forest species. Because these habitats are isolated from one another, some forms of plants and animals have become locally distinctive such as the Apache fox squirrel, Arizona cypress, Chiricahua rock flower, Apache pine, and Chihuahuan pine. Other species are of interest because of their threatened or peripheral status; for instance, the jaguar, jaguarundi, peregrine falcon, elegant trogon, violet-crowned hummingbird, and blue-throated hummingbird. Certain birds and mammals are primarily Mexican species, thriving at Chiricahua National Monument near the northern limits of their range.

The park's cultural resources are richly diverse, including evidence of inhabitation by prehistoric people of the Cochise and Athabascan cultures, use of the area by Apaches, occupation by the US Army during the Apache Wars, settlement of the West at the close of the Indian Wars, and early park development. Faraway Ranch is a historic district listed in the National Register of Historic Places. Consisting of the furnished Erickson-Riggs ranch house, several outbuildings, fences, pens, and corrals, this district represents cattle ranching and early tourism related to the Pinnacles. The ranch, which was added to the park in 1977, was the home of the Ericksons, who were among the first European American settlers in these mountains, and later of their daughter Lillian Riggs and her husband Ed. The Riggses operated Faraway Ranch as a pioneer guest ranch and were the primary promoters in establishing the national monument.

A short distance west of Faraway Ranch is the 1886 Buffalo Soldiers encampment. The Buffalo Soldiers were members of the 10th US Cavalry stationed in Arizona. These soldiers were sent to Bonita Canyon to prevent the Chiricahua Apaches from using local water sources, to guard the mail, and to protect settlers and their livestock. After the famous Chiricahua leader Geronimo and his band surrendered in September 1886, the Buffalo Soldiers departed. While in the area, the troopers built a stone monument to the late President James Garfield. Today, only the base of this monument remains. In the 1920s, Ed Riggs removed the upper stones, many with inscriptions by the soldiers, using them to build the fireplace in his ranch house.


The Civilian Conservation Corps (CCC) was active in the early development of the park. During the Great Depression years, CCC enrollees built or improved many of the park's classic structures, including the scenic drive and its extensive trail network. The Chiricahua National Monument Historic Designed Landscape is independently listed in the National Register of Historic Places. Its period of significance extends from the establishment of the park in 1924 to the close of the CCC era in 1940.

Today, the park encompasses 12,025 acres of the ruggedly beautiful mountain and canyon landscape.[1] In 1976, Congress designated a large portion of the park as wilderness, part of the national wilderness preservation system. Today, 10,290 acres—approximately 86% of the park—are designated wilderness. The park's remote location, distance from large towns, and the resulting lack of light pollution and anthropogenic noise contribute to wilderness character, a sense of remoteness, and the biological diversity of the park. A narrow corridor including the main park road, Massai Point, Echo Canyon Trailhead and parking area, Faraway Ranch, and other developed areas (e.g., visitor center, employee housing, maintenance yard, and campground) are excluded from the wilderness area, as is an unpaved road to King of Lead Mine.

Visitors to the park can enjoy a range of outdoor activities, including hiking, camping, picnicking, wildlife viewing, and photography. Almost 20 miles of day use trails weave throughout the park offering hikers an outstanding opportunity to experience rock formations, scenic views, and solitude. Camping at Bonita Canyon Campground is popular, but no overnight use is allowed in the backcountry. Depending on the season, visitors may also enjoy tours of historic Faraway Ranch or educational programs at Bonita Canyon Campground.

Chiricahua National Monument is managed as part of the NPS Southeast Arizona Group (SEAZ), which also includes Coronado National Memorial and Fort Bowie National Historic Site.

1. Of the park's current acreage, 11,172.38 acres are owned by the National Park Service while the other 850 acres included within the authorized boundary comprises federal land owned by other agencies and private parcels.

## Park Purpose

The purpose statement identifies the specific reason(s) for establishment of a particular park. The purpose statement for Chiricahua National Monument was drafted through a careful analysis of its enabling legislation and the legislative history that influenced its development. The park was established by presidential proclamation on April 18, 1924 (see appendix A for enabling legislation and subsequent amendments). The purpose statement lays the foundation for understanding what is most important about the park.

*Chiricahua National Monument preserves and interprets the distinctive rhyolite rock formations known as "the Pinnacles," designated wilderness, and features of vital historical and scientific interest for the benefit and enjoyment of current and future generations.*

## Park Significance

Significance statements express why a park's resources and values are important enough to merit designation as a unit of the national park system. These statements are linked to the purpose of Chiricahua National Monument, and are supported by data, research, and consensus. Statements of significance describe the distinctive nature of the park and why an area is important within a global, national, regional, and systemwide context. They focus on the most important resources and values that will assist in park planning and management.

The following significance statements have been identified for Chiricahua National Monument. (Please note that the sequence of the statements does not reflect the level of significance.)

1. Chiricahua National Monument features distinctive and abundant examples of rhyolitic rock formations, which form a rare and impressive geologic landscape. The park's pinnacles, spires, and balanced rocks were created 27 million years ago by one of the largest known volcanic eruptions in the American Southwest.

2. Chiricahua National Monument, within the scenic Chiricahua Mountains Sky Island Complex, protects exceptional biodiversity due to its location at a rare intersection of four major biomes (Sierra Madre, Rocky Mountain, Chihuahuan Desert, and Sonoran Desert).

3. Chiricahua National Monument, with its federally designated wilderness area, provides an opportunity to experience class I air quality, natural soundscapes, and one of the darkest night skies in the continental United States.

4. Chiricahua National Monument preserves, in a relatively small area, evidence of a diverse human history spanning thousands of years, encompassing prehistoric indigenous peoples, Chiricahua Apaches, Buffalo Soldiers, European American pioneers and ranchers, the Civilian Conservation Corps, and early tourists and park promoters.

5. Generations after being displaced from the Chiricahua Mountains, the Chiricahua Apaches and other American Indian tribes continue to feel a deep spiritual connection to these lands, which are a treasured part of their homeland. Ongoing research and discoveries continue to reveal important information about the connections between American Indians and the landscape.

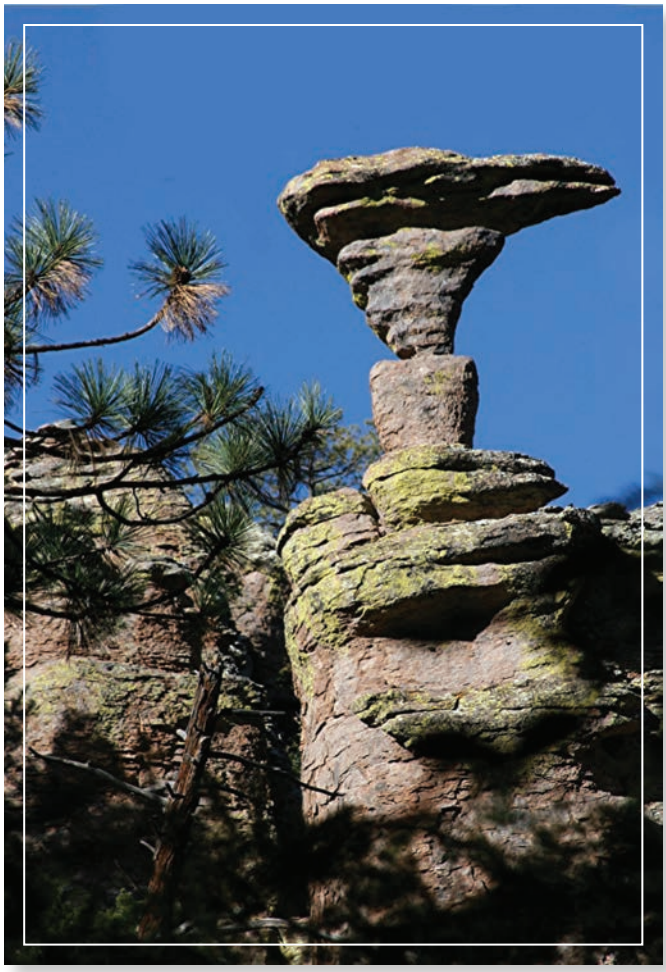
## Fundamental Resources and Values

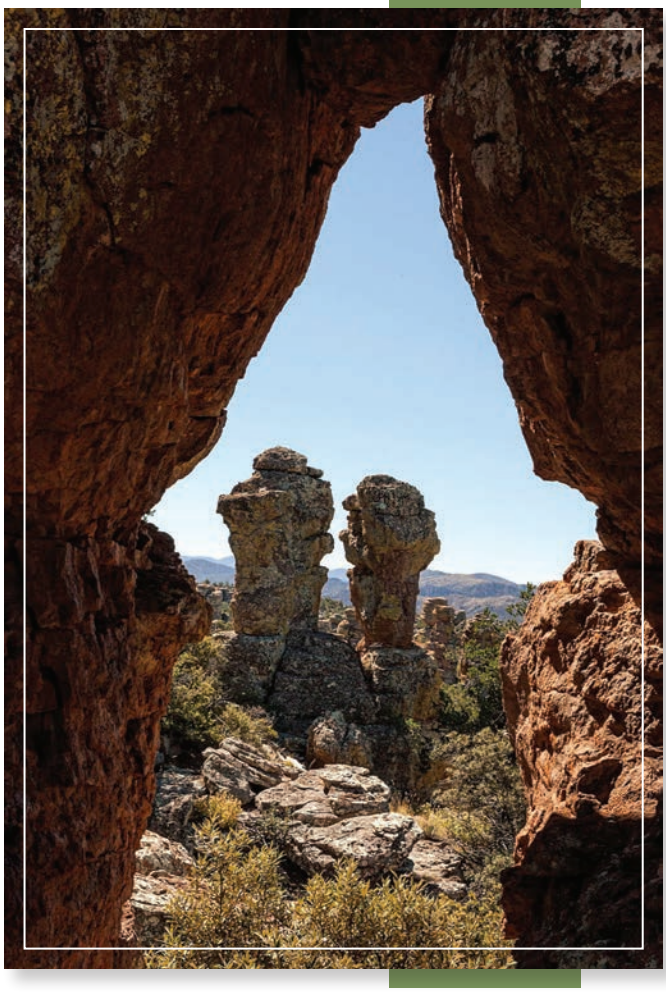
Fundamental resources and values (FRVs) are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to warrant primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance. Fundamental resources and values are closely related to a park's legislative purpose and are more specific than significance statements.

Fundamental resources and values help focus planning and management efforts on what is truly significant about the park. One of the most important responsibilities of NPS managers is to ensure the conservation and public enjoyment of those qualities that are essential (fundamental) to achieving the purpose of the park and maintaining its significance. If fundamental resources and values are allowed to deteriorate, the park purpose and/or significance could be jeopardized.

The following fundamental resources and values have been identified for Chiricahua National Monument:

- **Distinctive Rhyolite Formations Known as "The Pinnacles."** By far, the most noticeable natural features in Chiricahua National Monument are the rhyolite rock formations known as "the Pinnacles," which the park was established to protect. The slopes of the park are textured by what the Chiricahua Apaches called "standing up rocks"—the result of powerful volcanic events followed by millennia of geologic erosive forces. These formations continue to inspire visitors to the park today. Other fundamental geologic features include shallow caves, faults, mountainous terrain, soils, and lava flows.





- **Native Flora and Fauna of the Madrean Sky Island Ecosystem.** The Madrean Sky Island Ecosystem of Chiricahua National Monument protects a great diversity of flora and fauna (more than 1,200 documented species), as well as critical habitat for threatened, endangered, and/or endemic species. Here, where four distinct ecosystems meet, the cooler, moist, north-facing slopes host ponderosa pine and Douglas-fir characteristic of the Rocky Mountains. The sunny, dry southern slopes are home to Apache pine and Chihuahuan pine trees common in Mexico's Sierra Madre Mountains. Beargrass and yuccas from the Chihuahuan Desert mingle with agaves and prickly pear cactus from the Sonoran Desert. Scientists and recreationalists visit the park for its diversity, including many Mexican species at the northern limit of their range. Natural processes, including geologic and hydrologic activity, weather and climate, natural acoustic conditions, naturally dark skies, and historic fire regimes, have profoundly shaped and continue to affect the biotic communities found within Chiricahua National Monument.

- **Wilderness Character.** Eighty-six percent of Chiricahua National Monument is designated wilderness, managed to protect the character of the landscape. This land is protected and managed to preserve its natural, untrammeled, undeveloped, and other features of value and provide opportunities for visitors to immerse themselves in the stunning natural landscape, dark night skies, clear views, natural sounds, and diverse human history of the Chiricahua Mountains.

- **Scenic Views and Air Quality.** The Clean Air Act section 162(a) designates Chiricahua National Monument as a "Class I" area, providing special protection for air quality sensitive ecosystems and clean, clear views, both within and beyond the park boundary. These scenic vistas are a key component of the visitor experience, particularly along scenic Bonita Canyon Drive and from Massai Point and other scenic overlooks. Visitors can take in the nearby rhyolite pinnacles, lush riparian zones, and canyon landscapes, or distant Rincon Peak and Mica Mountain near Tucson and Cochise Stronghold in the Dragoon Mountains across Sulphur Springs Valley.


- **Faraway Ranch Historic District.** Preserved within the Faraway Ranch Historic District are structures, resources, and landscapes of regional and national significance associated with the local Chiricahua Apaches, the end of the western frontier, Buffalo Soldiers, European American pioneers and ranches, and the people who promoted the establishment and early tourism of Chiricahua National Monument. Today, grounds of the ranch and cabin homestead are open year-round to visitors, and tours of the Faraway Ranch house are available.

- **CCC Structures and Landscapes.** The young men of the Civilian Conservation Corps played a significant role in the development, interpretation, and survey of the park in the 1930s, including developing the majority of the stone facilities that are still in use today. For instance, they improved the scenic drive and built most of the structures within the park, including the original park headquarters (now the park visitor center), Sugarloaf Mountain fire lookout, Massai Point exhibit building, maintenance facilities, campground, and staff housing. Many of these facilities embody the distinctive characteristics of the NPS rustic style of architecture, which employs naturalistic design principles to harmonize built features with their natural and cultural setting. CCC enrollees also constructed most of the park's extensive trail system, which is the park's primary recreational amenity.

- **Archeological and Ethnographic Resources.** Human presence in the Chiricahua Mountains extends back to the Paleo-Indians, and encompasses multiple cultures that used and traveled the park before the arrival of European Americans. Many historic archeological sites have been identified within the park, documenting American Indian presence in the area since the late 19th century. Housing foundations, bedrock mortars, stone tools, and roasting pits illustrate how American Indians lived prior to contact with European Americans, while iron arrow points and other modified metal artifacts showcase a meshing of cultures. Pictographs exist in small quantities within the park. These resources open up new ways of understanding the park and interpreting its cultural significance.

## Interpretive Themes

Interpretive themes are often described as the key stories or concepts that visitors should understand after visiting a park—they define the most important ideas or concepts communicated to visitors about a park unit. Themes are derived from, and should reflect, park purpose, significance, resources, and values. The set of interpretive themes is complete when it provides the structure necessary for park staff to develop opportunities for visitors to explore and relate to all park significance statements and fundamental resources and values.

Interpretive themes are an organizational tool that reveal and clarify meaning, concepts, contexts, and values represented by park resources. Sound themes are accurate and reflect current scholarship and science. They encourage exploration of the context in which events or natural processes occurred and the effects of those events and processes. Interpretive themes go beyond a mere description of the event or process to foster multiple opportunities to experience and consider the park and its resources. These themes help explain why a park story is relevant to people who may otherwise be unaware of connections they have to an event, time, or place associated with the park.

The following interpretive themes have been identified for Chiricahua National Monument:

- **Geology.** The dramatic beauty and quiet mystery of Chiricahua National Monument belies the violent volcanic deposition of white-hot ash. The resulting sediment, soils, and rocks laid the foundation for a geologic "work-in-progress."
- **Biodiversity.** Within the scenic sky island of the Chiricahua Mountains, Chiricahua National Monument provides visitors and researchers opportunities to explore and study richly diverse plant and animal life where biological and other natural processes continue relatively unaffected by human influence.
- **Wilderness Values.** The remoteness of Chiricahua National Monument allows contemplation and imagination through solitude, exploration, and discovery of the natural world—away from the distractions of contemporary life.
- **Human History.** Stories and evidence of struggle, perseverance, stewardship, and connection to the land, unite the experiences of the prehistoric indigenous peoples, the Chiricahua Apaches, the Buffalo Soldiers, European Americans, the CCC workers, and the early settlers. All left a lasting legacy and were in turn transformed by their experiences.

# Part 2: Dynamic Components

The dynamic components of a foundation document include special mandates and administrative commitments and an assessment of planning and data needs. These components are dynamic because they will change over time. New special mandates can be established and new administrative commitments made. As conditions and trends of fundamental resources and values change over time, the analysis of planning and data needs will need to be revisited and revised, along with key issues. Therefore, this part of the foundation document will be updated accordingly.

## Special Mandates and Administrative Commitments

Many management decisions for a park unit are directed or influenced by special mandates and administrative commitments with other federal agencies, state and local governments, utility companies, partnering organizations, and other entities. Special mandates are requirements specific to a park that must be fulfilled. Mandates can be expressed in enabling legislation, in separate legislation following the establishment of the park, or through a judicial process. They may expand on park purpose or introduce elements unrelated to the purpose of the park. Administrative commitments are, in general, agreements that have been reached through formal, documented processes, often through memorandums of agreement. Examples include easements, rights-of-way, arrangements for emergency service responses, etc. Special mandates and administrative commitments can support, in many cases, a network of partnerships that help fulfill the objectives of the park and facilitate working relationships with other organizations. They are an essential component of managing and planning for Chiricahua National Monument.

For more information about the existing special mandates and administrative commitments for Chiricahua National Monument, please see appendix C.

## Assessment of Planning and Data Needs

Once the core components of part 1 of the foundation document have been identified, it is important to gather and evaluate existing information about the park's fundamental resources and values, and develop a full assessment of the park's planning and data needs. The assessment of planning and data needs section presents planning issues, the planning projects that will address these issues, and the associated information requirements for planning, such as resource inventories and data collection, including GIS data.

There are three sections in the assessment of planning and data needs:

1. analysis of fundamental resources and values
2. identification of key issues and associated planning and data needs
3. identification of planning and data needs (including spatial mapping activities or GIS maps)

The analysis of fundamental resources and values and identification of key issues leads up to and supports the identification of planning and data collection needs.

### Analysis of Fundamental Resources and Values

The fundamental resource or value analysis table includes current conditions, potential threats and opportunities, planning and data needs, and selected laws and NPS policies related to management of the identified resource or value. Please see appendix B for the analysis of fundamental resources and values.

## Identification of Key Issues and Associated Planning and Data Needs

This section considers key issues to be addressed in planning and management and therefore takes a broader view over the primary focus of part 1. A key issue focuses on a question that is important for a park. Key issues often raise questions regarding park purpose and significance and fundamental resources and values. For example, a key issue may pertain to the potential for a fundamental resource or value in a park to be detrimentally affected by discretionary management decisions. A key issue may also address crucial questions that are not directly related to purpose and significance, but which still affect them indirectly. Usually, a key issue is one that a future planning effort or data collection needs to address and requires a decision by NPS managers.

The following are key issues for Chiricahua National Monument and the associated planning and data needs to address them:

- **Joint management of the Southeast Arizona Group park units.** Chiricahua National Monument, Coronado National Memorial, and Fort Bowie National Historic Site were previously independently managed by NPS staff assigned to one of the three units. Since 2006, the parks have been grouped together to be managed as the Southeast Arizona Group, sharing one superintendent, a centralized management team, and often sharing technical specialists. This centralization has resulted in many staff seeing an increase in their workload because they are now working for three parks instead of one. The disparity between the park units, both in terms of difference in resources, history, and issues, as well as the 4-hour round-trip drive between the units presents unique challenges to the management of the group. Supervisors must either drive long distances to visit their staff or sacrifice the benefits of face time to use more convenient remote technology to communicate. Lack of overnight temporary quarters exacerbates this issue. Additionally, resources are often taken from the joint pool of funding to resolve a significant issue at one of the three parks at a cost to basic operations of all three parks.

  However, there have been some benefits to joint management of the park units as well. The sharing of resources comes with some efficiency such as the ability to pool human resources to accomplish certain tasks more quickly (e.g., mowing, weeding, data collection). Additionally, personnel can cover for each other, although they may not typically be based at that specific unit. The parks are working to find ways to better function as a cohesive group and to strengthen ways to communicate and share information remotely among the three units.

  - *Data and planning needs to address this issue:* Strategic plan, which would include a space utilization assessment and recommendations; technology and communication plan.

- **Impacts from transborder activities, particularly illegal cross-border traffic of undocumented immigrants, drugs, and other illicit contraband.** All three Southeast Arizona Group parks have seen a dramatic increase in activity from the US-Mexico international border in recent years, including undocumented immigration and the trafficking of drugs and other contraband. Real and perceived danger from these cross-border activities impacts many aspects of the visitor experience and the daily operations of these parks. Safety concerns have also led the park to review and alter education programs offered on-site.

  Natural and cultural resources are also threatened by these cross-border activities and related enforcement efforts. Threats to natural resources include increased fire risk, wildlife disturbance, habitat destruction or modification, spread of invasive species, increased noise and artificial light, damage to cultural structures or sites, trash and human waste, and creation of new roads and trails. Efforts are underway to analyze and evaluate the impact of the border-related infrastructure on ecological processes, communities, and cultural resources.

  The parks could continue working with the Southwest Border Resource Protection Program to obtain financial and technical assistance to mitigate impacts on cultural and natural resources and to further collaborate with Mexican and American land managers and partners.

  - *Data and planning needs to address this issue:* Mapping resources impacted by border activities.

- **Conflicting adjacent land uses.** While much of the land surrounding the park is protected by the US Forest Service or rural in nature, development and uses adjacent to park boundaries are still important considerations. There is the potential for more extensive development of neighboring private lands over the next 10 years, which could compromise key viewsheds from the park. Uses nearby and sometimes encroaching on the park include illegal drug trafficking, mining, groundwater withdrawal, hunting, wood gathering, poaching, ranching, and livestock grazing. Area power plants are believed to contribute to air quality impacts in the park. Nitrogen oxides emissions reductions from the coal-fired power plants as well as sulfur dioxide emissions reduction from copper smelters are required by the Regional Haze Program by 2018 for the protection of Chiricahua National Monument and other regional class I areas, which will improve air quality conditions at the park.

  Chiricahua must continue working with governments, local partners, and any developers to ensure that the quality of visitor experience, resources, viewsheds, night skies, and acoustic soundscapes at the park are retained despite changes in surrounding land use.

  - *Data and planning needs to address this issue:* Visual resource inventory, visual resource management plan.

- **Limited accessibility.** Chiricahua National Monument presents accessibility-related challenges that may limit the facilities, services, and programs that are available to visitors. A variety of factors, including the park's rugged natural topography and extensive historic structures and facilities, restrict opportunities for physical accessibility to park areas and programs. In addition to physical barriers, programmatic factors may also present obstacles to fully experiencing the park. For example, printed interpretive materials, exhibits, maps, films, and other audiovisuals that are available at the park or online may not meet NPS accessibility standards and best practices. There is a need to evaluate physical and programmatic accessibility parkwide to identify barriers and develop solutions.

  Although a comprehensive assessment has not taken place, initial discussion has identified certain locations where accessibility potentially could be improved. For example, the trail that originates at the Bonita Creek picnic area and winds past Faraway Ranch to the Stafford Cabin is relatively flat and potentially could be made accessible. Access to the Faraway Ranch buildings could also be improved; however, improving physical accessibility to the buildings themselves is likely to pose challenges due to cultural resource concerns. Potentially, another facility that could be considered for accessibility improvements is the historic exhibit building atop Massai Point, which offers sweeping views of the park and surrounding lands. The park may also investigate accessibility needs and solutions at the visitor center and park offices. However, in order to determine where and how best to improve accessibility, a detailed and comprehensive assessment of park facilities, services, and programs would need to be completed.

  - *Data and planning needs to address this issue:* Accessibility assessment, accessibility self-evaluation and transition plan.

- **Natural hazards and visitor safety.** Natural hazards pose potentially serious problems for human safety, including flash flooding, rock falls, and tree falls. Flash floods can occur during the July to October monsoon season when heavy local thundershowers are common, and may also occur during other times of the year due to extreme precipitation events. Many of the park's facilities, including the main visitor center, lie within the 100-year flood zone. The Bonita Campground presents a particularly serious risk as Bonita and Surprise Canyons can channel flood waters through the area with little warning, with the potential to cut off campground access to the main park road. Rhyolite and Madrone Canyons converge approximately 100 yards below the campground, creating additional wash-out risks to roads servicing the park headquarters and Faraway Ranch historic district. Because of the small size of the watershed and the erratic nature of the storms, no practicable automated flood warning system is currently available. Ranger patrols warn campers when a flood threat appears likely from existing or predicted weather systems.

  Rock and tree fall are increasingly common along park roads and trails. Precipitation and wind events regularly result in small to large rocks falling onto roadways and trails and wind events result in similar impediments regarding trees. Both of these circumstances are exacerbated by degraded soil, rock, and vegetation conditions since the 2011 Horseshoe Fire. Similar to issues with flooding above, the location of trails, roads, and developed areas are in high hazard areas that cause concerns for visitor and park safety and for damages to sensitive park facilities; park staff are routinely required to remove these hazards.

  - *Data and planning needs to address this issue:* Strategic plan, which would include a space utilization assessment and recommendations; watershed analysis, including continued monitoring to better understand flash flooding events.; engineering study of roads and culverts.

- **Space utilization of park facilities.** The Southeast Arizona Group parks suffer from lack of building space and the utilization of existing on-site facilities. While each park has its own unique issues, there are general capacity issues that are found throughout the group.

  The expansion of buildings to meet evolving space and office needs at Chiricahua National Monument has been done on an as-needed basis, which has resulted in structures being used in the manner that may not be best suited for that structure or park significance and poor overall space utilization. Faraway Ranch is a good example. The historic ranch house, which was added to the park in the 1970s, has been a centerpiece for visitors and at one time housed field offices for interpretation, resources management, and trail crews. These offices gradually moved into other available buildings, leaving the ranch house underused. Currently the buildings are suffering from neglect as park funding is applied to maintaining other administrative structures.

  The Chiricahua National Monument visitor center building also illustrates this issue. The building previously served as both a visitor interpretive/information/orientation center and as the main administrative office. Because the visitor center is not large enough to adequately serve these two functions and does not lend itself to the full adaptations needed to modernize offices, the administrative office has been expanded into various out buildings, which is inefficient and expensive. Unfortunately, because the adjacent parking lot (which serves as the park's main point of visitor concentration) physically cannot be enlarged or relocated, the visitor center and headquarters cannot be enlarged to provide the necessary office space. The 2001 general management plan calls for building a large structure off-site to address these issues, but the likelihood of that plan coming to fruition is slight.

  Additionally, there is limited park housing available for employees, volunteers, researchers, and trail crews. While housing may be available in nearby communities, those communities are still a moderate distance from the park. There remains a significant need to address temporary overnight accommodations to employees working across the parks; alternatives include adding trailers, having the park pay for hotel lodging at nearby towns for volunteers, and camping. Strategic planning coupled with space utilization would help address these issues.

  - *Data and planning needs to address this issue:* Strategic plan, which would include a space utilization assessment and recommendations.

- **Road and parking issues.** Bonita Canyon Drive, the park's main thruway, was built in the 1930s. Because of its narrow width, lack of shoulders, and tight turning radii, the road is inadequate for the large recreational vehicles and buses that park visitors increasingly use, and this type of traffic is increasing. There are no legal passing zones and few places where a slow or large vehicle can leave the road to allow others to pass. As a result, large recreational vehicles, which tend to move slowly on the winding road, hold back other vehicles. The problem becomes acute when two such vehicles pass in opposite directions, filling the entire road. Being caught behind a slow-moving, view-blocking vehicle is frustrating for other drivers, which could potentially lead to a dangerous situation if the driver of the following vehicle should attempt to pass.

  The major parking locations are at Faraway Ranch, the visitor center, Sugarloaf Mountain, Echo Canyon, and Massai Point. The parking problem is serious, but not yet acute. The dead-end road, with its limited parking at major points of interest, imposes a definite limit on the number of vehicles that the park can accommodate at one time. Driving back and forth, fruitlessly looking for a parking space and perhaps finding one at a place where the visitor did not want to stop reduces a visitor's pleasure, as does waiting behind an idling vehicle. Parking is often inadequate during the high visitation months of February, March, and April. The visitor center parking area, which also serves as a trailhead for the trail system in Rhyolite Canyon and its tributary creeks, is so small (approximately 20 spaces) that it causes the greatest parking issue in the park. Some trailheads have small parking areas. When large recreational vehicles and trailers use these small lots, they commonly occupy two or more spaces, compounding the shortage.

  Since finalization of the park's 2001 general management plan and subsequent transportation study, the park has implemented some of the recommendations to alleviate these problems, including expansion of the Sugarloaf and Echo Canyon parking lots and implementation of vehicle length restrictions. The park has also implemented a hiker shuttle that departs from the visitor center once in the morning. However, because visitors must park at the visitor center to catch this shuttle, it does not address parking problems at the visitor center with the same efficiency that implementing a more regular shuttle to the park would, and length restrictions have proven difficult to enforce.

  *Data and planning needs to address this issue:* Strategic plan that would include a space utilization assessment and recommendations.

## Planning and Data Needs

To maintain connection to the core elements of the foundation and the importance of these core foundation elements, the planning and data needs listed here are directly related to protecting fundamental resources and values, park significance, and park purpose, as well as addressing key issues. To successfully undertake a planning effort, information from sources such as inventories, studies, research activities, and analyses may be required to provide adequate knowledge of park resources and visitor information. Such information sources have been identified as data needs. Geospatial mapping tasks and products are included in data needs.

Items considered of the utmost importance were identified as high priority, and other items identified, but not rising to the level of high priority, were listed as either medium- or low-priority needs. These priorities inform park management efforts to secure funding and support for planning projects.

| Planning Needs – Where A Decision-Making Process Is Needed | | | | |
|---|---|---|---|---|
| **Related to Park or SEAZ Management Group?** | **Related to an FRV or Parkwide Issue?** | **Planning Needs** | **Priority (H, M, L)** | **Notes** |
| Park | Pinnacles; Wilderness; CCC structures | Wilderness management plan | H | This plan would tier off of the outdated 1973 backcountry use plan and the more recent 2012 wilderness building blocks. The park has never had a comprehensive management plan for wilderness, even though it is mandated by the Wilderness Act. Wilderness character is a fundamental resource and value, and designated wilderness makes up a very large percentage of the park's total area. This plan would guide the preservation, management, and use of the park's wilderness area and would address current wilderness use issues and management needs. |
| Park and SEAZ group | Parkwide issue | Strategic plan | H | A strategic management plan would address operations, resources, and staffing concerns related to the joint management of the three SEAZ units and provide guidance on how to efficiently manage the parks and allocate funding, staffing, and resource protection. This plan is an operational priority.<br>Flooding is a big safety issue for visitors and staff within the park, particularly as it relates to essential infrastructure to evacuate the park, if necessary (i.e., vehicle bridge, footbridge, etc.). This plan would also help develop a strategy for the headquarters building/ area to handle potential flooding.<br>See "Identification of Key Issues" for more information. |
| Park and SEAZ group | Parkwide issue | Technology and communication plan | H | This plan is needed to address the challenges associated with the joint management of the three geographically dispersed SEAZ units. This plan would evaluate the current information technology infrastructure and make recommendations for technology and communication investments and strategies that could help improve the sharing of information among the park units, ultimately resulting in increased operational efficiency. In addition, options for improved connectivity of park housing would be explored to enhance quality of life. |
| Park | Faraway Ranch | Comprehensive site plan for Faraway Ranch Historic District | H | This plan would revisit and integrate select recommendations from the cultural landscape inventory and cultural landscape report for the Faraway Ranch Historic District, incorporating additional recommendations for circulation, maintenance, integrated pest management, accessibility, visitor services and interpretation, and potential reuse of the buildings. If appropriately managed, this area could be a focal point for visitor activities, and potentially for park operations. This plan should be coordinated with the parkwide strategic plan to ensure that new construction is not included within the historic district and that existing historic structures are used efficiently. |
| Park | Faraway Ranch; CCC structures; Archeology and ethnography | Develop evacuation plan for museum collections | H | Chiricahua National Monument's remote location, on-site collection storage facility, and the size of its original museum collection make the park's collection vulnerable to natural disasters including flash floods and wildfires. This plan would provide guidance on how to safely move the collections during an emergency. |

| Planning Needs – Where A Decision-Making Process Is Needed | | | | |
|---|---|---|---|---|
| **Related to Park or SEAZ Management Group?** | **Related to an FRV or Parkwide Issue?** | **Planning Needs** | **Priority (H, M, L)** | **Notes** |
| Park and SEAZ group | Archeology and ethnography | Finalize plan of action for NAGPRA and inadvertent discoveries | H | The park has a draft Native American Graves Protection and Repatriation Act (NAGPRA) action plan, and needs to conduct consultation and approval process with affiliated tribes to finalize the effort. One plan would cover all three SEAZ parks. |
| Park and SEAZ group | Parkwide issue | Accessibility self-evaluation and transition plan | M | Currently, the SEAZ group addresses accessibility issues in a piecemeal fashion through other projects, as funding allows. The self-evaluation and transition plan would satisfy legal requirements and provide a comprehensive approach to improving accessibility in all three units of SEAZ. This plan would tier off the data gathered through the accessibility assessment and would propose specific strategies for improving accessibility over time.<br>See "Limited Accessibility" in the "Identification of Key Issues" for more information. |
| Park and SEAZ group | All FRVs | Resource stewardship strategy | M | The natural and cultural resource management plans for all three SEAZ parks are outdated, and a resource stewardship strategy would provide a strategic plan for the park's resource stewardship program. The document allows parks to develop long-term strategies, activities, action items, and funding priorities that would inform management decisions with the goal of moving natural, cultural, and ethnographic resource conditions closer to the resources' identified desired conditions. |
| Park | CCC structures | Preservation management plan for CCC resources | M | CCC structures comprise a large portion of the park's infrastructure, including buildings and main park road, trails, and culverts. Currently, the park does not have detailed guidance for how to manage these resources comprehensively. This plan would provide consistency for decisions regarding preservation of CCC resources. |
| Park | Faraway Ranch | Collections management plan | M | This plan would tier off the existing scope of collections statement. The park has not previously had a collections management plan, but a need has existed for one for some time.<br>This plan would address the objects in the ranch house at Faraway Ranch and determine rotation, storage, maintenance, and curation of objects. |
| Park and SEAZ group | Madrean Sky Island ecosystem | Complete ecological restoration plan for the three SEAZ units | M | NPS staff are currently working on this plan to comprehensively address ecological restoration of the landscape for all three SEAZ units. This effort is similar to ones completed at both Organ Pipe Cactus National Monument and Saguaro National Park. |
| Park | Archeology and ethnography | Preservation plan for archeological and ethnographic resources | M | This plan has received funding and an agreement is in place to accomplish the plan. This plan is needed to address archeology resources from general improved management. More resources have been found in recent years, emphasizing an increased need for planning. It would determine the thresholds for when to apply treatment to archeological and ethnographic resources. This plan includes data recovery efforts. |

| Planning Needs – Where A Decision-Making Process Is Needed | | | | |
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| **Related to Park or SEAZ Management Group?** | **Related to an FRV or Parkwide Issue?** | **Planning Needs** | **Priority (H, M, L)** | **Notes** |
| Park | CCC structures | Historic structure reports for CCC structures | M | These reports would provide the primary guide for treatment and use of historic structures and their immediate environment. These reports would be completed prior to completion of a cultural landscape report for the historic designed / CCC landscape. |
| Park | CCC structures | Cultural landscape report for historic designed / CCC landscape | M | This report would be the primary document for guiding management and preservation of this cultural landscape. This report would be completed following completion of the historic structures reports. |
| Park and SEAZ group | Madrean Sky Island ecosystem | Integrated pest management plan | M | Fires and climate change can introduce invasive nonnative species to the park that can eventually replace plants, invertebrates, and animals native to the Madrean Sky Island ecosystem. An integrated pest management plan would guide park staff through appropriate preventive and restorative management activities for landscape features, historic structures including those at Faraway Ranch, and museum collections. A recent environmental audit identified this plan as a need. |
| Park | Faraway Ranch | Develop plan to complete conservation treatments for items on exhibit at Faraway Ranch | M | Official conservation treatment plans for these ranching-related museum objects would help the park address common condition issues and improve the overall care and preservation of the artifacts. |
| Park | CCC structures | Site planning for CCC-designed landscape district | M | This site planning would address circulation issues and parking. |
| Park | Madrean Sky Island ecosystem; CCC structures | Update scope of collections statement | M | This effort would update the current scope of collections to include considerations of collection of voucher species to document biodiversity and climate change, preservation of appropriate architectural items, and provide guidelines for items to be deaccessioned. |
| Park | Scenic views and air quality | Develop design guidelines for sensitive and compatible park development | L | In NPS units, structures, roads, and other features of the built environment should be sensitively sited and designed to harmonize with the natural environment and cultural context. By providing guidance to NPS personnel and design and construction consultants, design guidelines would help ensure that future park development respects the scenic qualities of the park. |
| Park and SEAZ group | Scenic views and air quality; Parkwide issue | Visual resource management plan | L | This plan would identify important views within and beyond the unit boundaries and recommend steps to preserve them for scenic and (as relevant) historic values. This plan would be informed by the visual resource inventory. |

| Data Needs – Where Information Is Needed Before Decisions Can Be Made | | | | |
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| **Related to Park or SEAZ Management Group?** | **Related to an FRV or Parkwide Issue?** | **Data and GIS Needs** | **Priority (H, M, L)** | **Notes** |
| Park | Parkwide issue | Engineering study of road and culverts | H | Many of the roads and culverts are historic and were not built to current engineering standards to withstand potential flooding events. These data would inform the strategy for the headquarters building/area to withstand potential flooding. These data are essential to protect visitors and staff in the park. |
| Park | CCC structures | Oral histories of living CCC alumni | H | As the living alumni and descendants of alumni age, it is necessary to gather this information quickly. |
| Park | Wilderness | Information about visitor wilderness use | H | This information would help inform the wilderness management plan. Some information is currently collected, but this would be expanded to include information on number of visitors, patterns and circulation, and time spent in the wilderness for hikers and equestrians. |
| Park | Parkwide issue | Use of remote sensing to examine resource conditions and threats | H | Advancements in technology and the accessibility of imagery have resulted in improved utility of remotely sensed data for parks. The park should partner with private and government organizations to acquire imagery and use it for analysis of resource conditions and threats. |
| Park and SEAZ group | Parkwide issue | Mapping of resources impacted by border activities | H | This is a high priority, which would protect sensitive natural and cultural resources, including impacts within designated wilderness. This effort could be accomplished through use of remote sensing. |
| Park | CCC structures | Update List of Classified Structures database and condition assessments for CCC structures | H | The park has notebooks defining each structure on the List of Classified Structures database and their general condition, which are used as decision guides. These notebooks need to be updated, digitized, and correlated to information in the Facility Management Software System and the online List of Classified Structures database. It is also necessary for the park to determine if all historic structures are classified and, if not, update documentation and the national register with missing information. |
| Park | Madrean Sky Island ecosystem | Study to examine pollution dose-response relationships in sensitive park ecosystems | H | This study would inform park research, particularly as related to past and future impacts from nearby mining operations. This effort could tier off lichen studies. |
| Park | Wilderness; Scenic views and air quality | Night sky monitoring | H | This monitoring would allow park to document changes in conditions and track any specific resource issues if they arise (new nearby development, etc.). |
| Park | Madrean Sky Island ecosystem | Develop and implement research plan to identify and locate natural history collections and associated field records | H | The implementation of this plan would include conducting research to identify, accession, and catalog existing but unaccessioned natural history collections in non-federal repositories, as well as updating accession records and catalog to include specimens and field records resulting from studies and resource protection efforts. |

| Data Needs – Where Information Is Needed Before Decisions Can Be Made | | | | |
|---|---|---|---|---|
| **Related to Park or SEAZ Management Group?** | **Related to an FRV or Parkwide Issue?** | **Data and GIS Needs** | **Priority (H, M, L)** | **Notes** |
| Park and SEAZ group | Parkwide issue | Accessibility assessment | M | A variety of accessibility-related challenges may limit the facilities, services, and programs that are available to park visitors. There is a need to evaluate accessibility parkwide and throughout the SEAZ group, taking into account physical accessibility to park areas and facilities, as well as accessibility to services and programs, such as interpretation and information. A comprehensive assessment would identify physical and programmatic barriers to accessibility, leading to the development of solutions that would be spelled out in an accessibility transition plan.<br>See "Limited Accessibility" in the "Identification of Key Issues" for more information. |
| Park | Wilderness | Assess demand and impacts of potential camping in the wilderness | M | Data are needed to inform the wilderness management plan and to help NPS staff consider options for expanded visitor opportunities within the designated wilderness. These data would also consider how the park could effectively implement any changes to these opportunities. |
| Park | Archeology and ethnography | Develop better understanding of ethnographic resources | M | This information is recommended in the ethnographic overview and assessment. This study would also help inform management and interpretation of park resources. |
| Park | CCC structures | Assessment inventory of all CCC structures and consolidate all information | M | This information is particularly important in light of the post-fire flooding events, where two dams were recently lost. Information could be used from the Facility Management Software System to update the List of Classified Structures database. |
| Park and SEAZ group | Madrean Sky Island ecosystem | Research post-fire ecosystem through assessments of vegetation, wildlife, and watershed | M | This process has been started and needs to be continued. It is related to the watershed analysis listed below. |
| Park and SEAZ group | Madrean Sky Island ecosystem | Identify ecological restoration needs and strategy | M | The ecological restoration needs and strategy would focus on general treatment methods and needed compliance. The assessment of restoration needs would identify all the places ecological restoration is accompanied by a time line. This would be combined in a digital database. |
| Park and SEAZ group | Madrean Sky Island ecosystem | Invasive species monitoring and treatment | M | Monitoring is particularly needed in the post-fire ecosystem, as opportunistic invasive species are becoming established in the parks. This need relates to all three SEAZ units. This effort was previously being completed by the NPS Sonoran Desert Inventory and Monitoring Program but limited funding necessitated its termination. The NPS Exotic Plant Management Team can provide some assistance. |
| Park | Parkwide issue | Watershed analysis | M | A watershed analysis is important, particularly in light of recent fires and is connected to the engineering study of the roads and culverts. This effort would include continued monitoring to have a better understanding of flash flood events. |

| Data Needs – Where Information Is Needed Before Decisions Can Be Made | | | | |
|---|---|---|---|---|
| **Related to Park or SEAZ Management Group?** | **Related to an FRV or Parkwide Issue?** | **Data and GIS Needs** | **Priority (H, M, L)** | **Notes** |
| Park and SEAZ group | Madrean Sky Island ecosystem; Scenic views and air quality | Expand understanding of climate change through added weather stations and continuous collection of weather data (temperature, precipitation) to validate climate change over time | M | In addition to continued monitoring of the air monitoring station at the park, this effort would increase the understanding of weather and climate change in the area through additional monitoring stations within the three SEAZ units. Climate monitoring is a national priority and would provide important information to inform future park protection of natural and cultural resources with respect to climate change. |
| Park and SEAZ group | Madrean Sky Island ecosystem | Work with tribes to complete a traditional environmental knowledge project to assist with management of natural resources | M | This information could describe historic conditions and assist with management and interpretation. |
| Park | Faraway Ranch | Complete collection condition survey | M | Chiricahua National Monument museum collections range from natural history specimens collected during field research to everyday household items given to the museum during the Faraway Ranch acquisition. A condition survey is needed to assess the state of individual objects and collections and flag potential conservation projects. This survey would inform the scope of collections statement and conservation plan for museum objects. |
| Park | Faraway Ranch | Complete file plan to set up structure for data management for museum collections | M | As the park continues to acquire artifacts through archeological and natural history surveys, it is important to ensure that museum and archive records are effectively managed. A file plan for Chiricahua National Monument would provide organizational structure designed to help staff manage data and the collections. |
| Park | Faraway Ranch | Conduct archives survey | M | The park currently manages documents about the park's historic, natural history, and archeological resources as well as administrative records. A survey would allow the park to inventory what it holds, what park documents should be included in the park archives, and what collections are stored off-site at the NPS Western Archeological and Conservation Center. |
| Park | Madrean Sky Island ecosystem | Assess impact of mercury and other toxics on biota in the park | M | This effort would include impacts on invertebrate insects and provide the park with knowledge about ecosystem characteristics that enhance mercury methylation at the park. |
| Park | All FRVs | Update long-range interpretive plan | M | An updated long-range interpretive plan would allow the park to continue to define its interpretive offerings to best present the history of the region, the park's natural resources, and dynamic natural processes. |

| Data Needs – Where Information Is Needed Before Decisions Can Be Made | | | | |
|---|---|---|---|---|
| **Related to Park or SEAZ Management Group?** | **Related to an FRV or Parkwide Issue?** | **Data and GIS Needs** | **Priority (H, M, L)** | **Notes** |
| Park | Archeology and ethnography | Continue monitoring archeological sites | L | This effort includes annual monitoring and compliance of sites and includes monitoring the sites for border-related activity. |
| Park | Pinnacles | Inventory locations and historic names of specific formations | L | For historic reference. |
| Park | CCC structures | Complete park administrative history | L | This project is ongoing and would probably be in draft form by end of fiscal year 2015. |
| Park | Pinnacles | Update lichen studies | L | As lichen are particularly susceptible to climate change and air quality, these data would inform what impact climate change has on the formations and erosion rates. This effort would update lichen studies from the 1990s. |
| Park | Scenic views and air quality | Continued monitoring from air quality station | L | The park currently would continue monitoring air quality parameters (e.g., visibility, ozone, wet deposition) from the air quality station in the park. This is essential to protect the class I area in the park. |
| Park | Wilderness | Continue monitoring commercial use | L | Continue monitoring commercial horse and hiking tours in the wilderness for impacts on trails, resources, and other visitors. |
| Park | Archeology and ethnography | Continue archeological surveys | L | These projects seek to complete historical restoration activities for recently discovered archeological sites, appearing to be mostly Apache in origin. |
| Park and SEAZ group | Madrean Sky Island ecosystem | Complete comprehensive plant and wildlife inventory | L | A comprehensive inventory would include surveys for rare plants and wildlife and improved/regular documentation of populations. (This effort is already underway.) |
| Park and SEAZ group | Scenic views and air quality; Parkwide issue | Visual resource inventory | L | In this analysis, key viewshed points in the park units would be identified, and spatial mapping would be used to identify the corridors visible from each viewpoint as well as the scenic quality of the identified views and the NPS and visitor values related to the importance of the views. This information would inform the viewshed management plan and provide a useful aid in park development planning. |
| Park | Archeology and ethnography | Documentation of cultural uses in caves/alcoves | L | There are several known caves with identified cultural resources in the park. However, some of these are not well documented and there are several written references to caves/alcoves of cultural significance. A comprehensive data and field assessment is needed to document these resources. |
| Park | Madrean Sky Island ecosystem; Archeology and ethnography | Climate change vulnerability assessment | L | Includes assessment for select flora and fauna species and priority archeological resources. |

# Part 3: Contributors

## Chiricahua National Monument

Allen Etheridge, Superintendent

Lane Baker, Superintendent (retired)

Julena Campbell, Chief of Interpretation

Jeremy Curtis, Chief of Maintenance

Larry Ludwig, Historian

Jason Lux, Chief of Law Enforcement (acting)

Jason Mateljak, Chief of Resources

Enriqueta Ramirez, Administrative Officer, Chiricahua National Monument and Fort Bowie National Historic Site (retired)

Jane Rodgers, Superintendent (acting)

Matt Stoffolano, Chief Ranger

Nancy Wilcox, Administrative Officer (Coronado National Memorial)

## NPS Intermountain Region

Darcee Killpack, Regional GIS Coordinator

Skip Meehan, Planner, IMR Regional Liaison

## Other NPS Staff

Ken Bingenheimer, Editor, Denver Service Center – Planning

Sarah Conlin, Natural Resource Specialist, Denver Service Center – Planning

Tom Gibney, Project Manager, Denver Service Center – Planning

Wanda Gray Lafferty, Contract Editor, Denver Service Center – Planning

Kelly Hatton, Contract Editor, Denver Service Center – Planning

John Paul Jones, Visual Information Specialist, Denver Service Center – Planning

Charles Notzon, Economist, Denver Service Center – Planning

Hilary Retseck, Cultural Resource Specialist, Denver Service Center – Planning

# Appendixes

## Appendix A: Presidential Proclamation and Legislative Acts for Chiricahua National Monument

### Summary of Legislative History of Chiricahua National Monument

- Presidential Proclamation No. 1692, April 18, 1924 (43 Stat. 1946) established Chiricahua National Monument as part of the Coronado National Forest.
- Presidential Proclamation No. 2288, June 10, 1938 (52 Stat. 1551) enlarged the boundary of Chiricahua National Monument by 6,407 acres.
- Congressional act of October 20, 1976 (PL 94-567, 90 Stat. 2692) designated 95% (9,440 acres) of the park as wilderness, and 2 acres as potential wilderness.
- The National Parks and Recreation Act of 1978 (PL 96-625, 92 Stat. 3473) expanded the boundary with the acquisition of the 440-acre Faraway Ranch, bringing the total to 11,085. (Not included in this appendix.)
- The Arizona Wilderness bill of August 28, 1984 (PL 98-406, 98 Stat. 1491) added Bonita Creek watershed and stipulated that it be administered as wilderness. (Not included in this appendix.)
- Federal Register notice of April 14, 2014 (FR Doc. 2014-19230) modified the boundary of Chiricahua National Monument to include 40 acres of land located in Cochise County, Arizona, immediately adjacent to the western boundary of the park. This land was purchased from The Trust for Public Land, a nonprofit conservation organization. (Not included in this appendix.)

## Presidential Proclamation No. 1692, April 18, 1924 (43 Stat. 1946) established Chiricahua National Monument as part of the Coronado National Forest

1946 PROCLAMATIONS, 1924.

April 18, 1924.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

A PROCLAMATION

Chiricahua National Monument, Ariz. Preamble.

WHEREAS, certain natural formations, known as "The Pinnacles," within the Coronado National Forest, in the State of Arizona, are of scientific interest, and it appears that the public interests will be promoted by reserving as much land as may be necessary for the proper protection thereof, as a National Monument.

National Monument in Coronado National Forest, Arizona.

NOW, THEREFORE, I, Calvin Coolidge, President of the United States of America, by virtue of the power in me vested by section two of the Act of Congress approved June eight, nineteen hundred and six, entitled, "An Act for the preservation of American antiquities", do proclaim that there are hereby reserved from all forms of appropriation under the public land laws, subject to all prior valid adverse claims, and set apart as a National Monument, the following described tracts of land in the State of Arizona:

Description.

W½ Sections 19, 30 and 31, Township 16 South, Range 30 East, G. & S. R. M.; Sections 24, 25 and 36, Township 16 South, Range 29½ East, G. & S. R. M.; S½ Section 24, unsurveyed; Section 35, unsurveyed; Section 36, unsurveyed; Township 16 South, Range 29 East, G. & S. R. M.

Use of Coronado National Forest not affected.

The reservation made by this proclamation is not intended to prevent the use of the lands for National Forest purposes under the proclamation establishing the Coronado National Forest, and the two reservations shall both be effective on the land withdrawn but the National Monument hereby established shall be the dominant reservation and any use of the land which interferes with its preservation or protection as a National Monument is hereby forbidden.

Warning is hereby given to all unauthorized persons not to appropriate, injure, deface, remove or destroy any feature of this National Monument, or to locate or settle on any of the lands reserved by this proclamation.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 18 day of April, in the year of our Lord one thousand nine hundred and twenty-four, and of the Independence of the United States of America the one hundred and forty-eighth.

[SEAL.]

CALVIN COOLIDGE

By the President:
CHARLES E. HUGHES,
*Secretary of State.*

## Presidential Proclamation No. 2288, June 10, 1938 (52 Stat. 1551) enlarged the boundary of Chiricahua National Monument by 6,407 acres

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

June 10, 1938
[No. 2288]

### A PROCLAMATION

Chiricahua National Monument, Ariz.
Preamble.

WHEREAS it appears that the hereinafter-described lands comprising a part of the Coronado National Forest, in the State of Arizona, are adjacent to the Chiricahua National Monument, established by proclamation dated April 18, 1924, and are required for the proper care and management of the objects of historic and scientific interest being protected by the said monument:

NOW, THEREFORE, I, FRANKLIN D. ROOSEVELT, President of the United States of America, under and by virtue of the authority vested in me by section 1 of the act of June 4, 1897, 30 Stat. 11, 34, 36 (U. S. C., title 16, sec. 473), and section 2 of the act of June 8, 1906, ch. 3060, 34 Stat. 225 (U. S. C., title 16, sec. 431), do proclaim that, subject to all valid existing rights, the following-described lands in the State of Arizona are hereby excluded from the said Coronado National Forest and are hereby added to and made a part of the said Chiricahua National Monument:

GILA AND SALT RIVER MERIDIAN—ARIZONA

| | |
|---|---|
| T. 16 S., R. 29 E., | sec. 22, all,<br>sec. 23, all, partly unsurveyed,<br>sec. 24, N½, unsurveyed,<br>sec. 25, all, unsurveyed,<br>sec. 26, all,<br>sec. 27, N½; |
| T. 17 S., R. 29 E., | sec. 1, N½, N½SE¼, NE¼SW¼,<br>sec. 2, N½; |
| T. 16 S., R. 29½ E., | sec. 13, S½; |
| T. 17 S., R. 29½ E., | sec. 1, N½, unsurveyed; |
| T. 16 S., R. 30 E., | sec. 18, S½,<br>sec. 19, E½,<br>sec. 30, E½,<br>sec. 31, E½,<br>sec. 32, W½W½; |
| T. 17 S., R. 30 E., | sec. 5, W½NW¼, unsurveyed,<br>sec. 6, N½, unsurveyed; |

containing approximately 6,407 acres.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy, or remove any feature of this monument and not to locate or settle upon any of the lands thereof.

The Director of the National Park Service, under the direction of the Secretary of the Interior, shall have the supervision, management, and control of the monument as provided in the act of Congress entitled "An act to establish a National Park Service, and for other purposes," approved August 25, 1916, 39 Stat. 535 (U. S. C., title 16, secs. 1 and 2), and acts supplementary thereto or amendatory thereof.

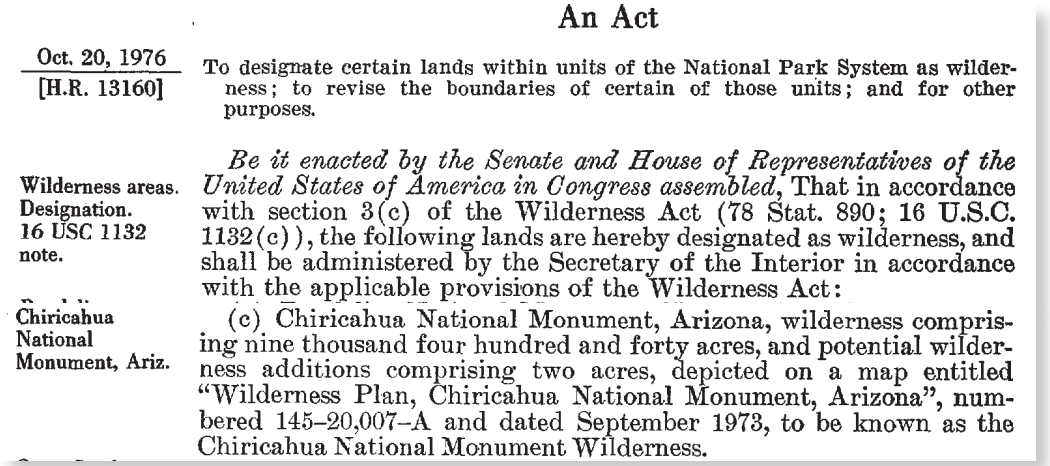
IN WITNESS WHEREOF I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this tenth day of June in the year of our Lord nineteen hundred and thirty-eight, and of [SEAL] the Independence of the United States of America the one hundred and sixty-second.

FRANKLIN D ROOSEVELT

By the President:
CORDELL HULL
*Secretary of State.*

## Congressional act of October 20, 1976 (PL 94-567, 90 Stat. 2692) designated 95% (9,440 acres) of the monument as wilderness, and 2 acres as potential wilderness



An Act

Oct. 20, 1976
[H.R. 13160]

To designate certain lands within units of the National Park System as wilderness; to revise the boundaries of certain of those units; and for other purposes.

Wilderness areas. Designation. 16 USC 1132 note.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled*, That in accordance with section 3(c) of the Wilderness Act (78 Stat. 890; 16 U.S.C. 1132(c)), the following lands are hereby designated as wilderness, and shall be administered by the Secretary of the Interior in accordance with the applicable provisions of the Wilderness Act:

Chiricahua National Monument, Ariz.

(c) Chiricahua National Monument, Arizona, wilderness comprising nine thousand four hundred and forty acres, and potential wilderness additions comprising two acres, depicted on a map entitled "Wilderness Plan, Chiricahua National Monument, Arizona", numbered 145–20,007–A and dated September 1973, to be known as the Chiricahua National Monument Wilderness.

# Appendix B: Analysis of Fundamental Resources and Values

| Fundamental Resource or Value | Distinctive Rhyolite Formations Known as "The Pinnacles" |
|---|---|
| **Related Significance Statements** | Significance statement 1. |
| **Current Conditions and Trends** | **Conditions**<br>• The geologic formations preserved in the park are spectacular examples of physical and chemical weathering processes. The rock spires, or "pinnacles," are erosional features formed in the Rhyolite Canyon tuff.<br>• Pinnacles can be found throughout the park on the upper slopes. They are concentrated in the central to southeastern corner of the park, in the "heart of rocks" or upper Rhyolite Canyon drainage and in the upper elevations of the Bonita Canyon drainage.<br>• Visitors are able to view the pinnacles, both from the car along the scenic drive and while on foot or horseback on the park's trail system.<br>• Engineering analysis of the pinnacles shows the pinnacles are strong and well within their mechanical failure limits for static load. Most pinnacles are in generally good and stable condition. Columns supporting balanced rocks above V-shaped incuts have been shown to be more stable than those columns that do not have necks.<br>• The pinnacles received little damage from the 2014 earthquake and 2011 fire events, although some of the surface was lost (spalling) from the fire.<br>• Since the recent 2011 fire, the rock formations are more visible due to vegetation loss in many areas.<br>• The lichen covering the pinnacles provides park staff with an indication of air quality and some information regarding climate change.<br>• Rock climbing is prohibited in the park.<br>• Some of the rock formations are named (i.e., Punch & Judy, Duck on a Rock, Totem Pole, the Sea Captain, Mushroom Rock, etc.).<br>**Trends**<br>• Studies show that the pinnacles are remarkably stable over the long term, although natural erosion processes continue.<br>• In recent years, visitation to the park has declined. The same percentage of those visitors are probably still using the trail system that passes the rock formations. Lower visitation should correlate with less impact to the resources. |
| **Threats and Opportunities** | **Threats**<br>• Climate change and air pollution may impact sensitive lichen covering the rock formations, which could affect the way the formations erode with time.<br>• Activity from the international border, including the littering of trash throughout the park and building illegal campsites and fires often negatively impacts views of the formations.<br>• Mass wasting is an issue in many sections of the park. This occurs where an easily eroded volcanic ash layer undercuts a cliff of densely welded tuff, causing potential collapse of the overlying rock. Slumps and landslides may present safety and maintenance issues for the park.<br>• Dynamic failure (which involves seismic shaking by a lateral force) could occur and topple the pinnacles during a relatively strong earthquake.<br>• Illegal climbing on or other inappropriate visitor use that involves touching or manipulating the pinnacles may promote rockfall.<br>• Illegal collection of samples of galena and sphalerite (lead-zinc minerals) as well as spherulites (or hailstones) along park trails. The number of specimens removed from the park has not been documented, and it is unclear how large a problem mineral theft is for the park. However, a popular trail segment passes areas with particularly tempting hailstones to collect. |

| Fundamental Resource or Value | Distinctive Rhyolite Formations Known as "The Pinnacles" |
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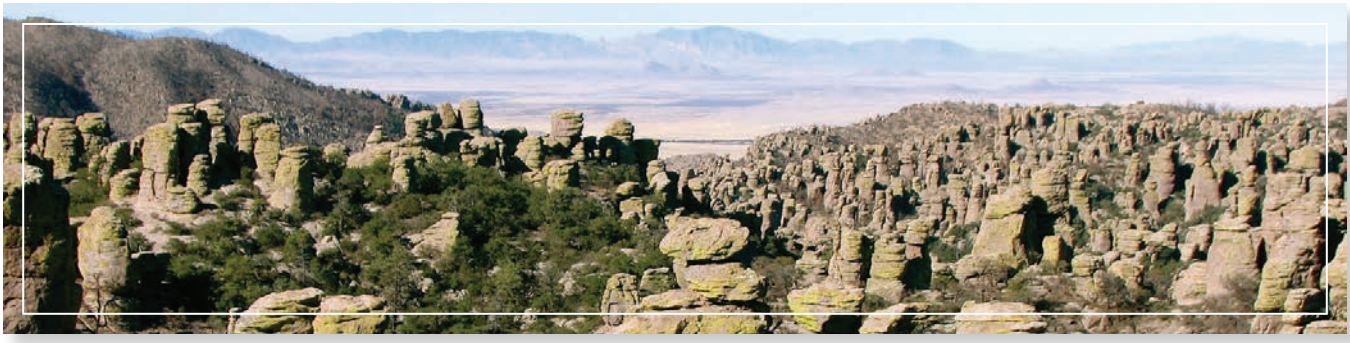
| **Threats and Opportunities** | **Threats (continued)**<br>• Due to changes in vegetation from the 2011 fire, the potential for another landscape fire is higher, which may negatively impact the formations.<br>• Acid mine drainage from the King of Lead Mine can contribute to erosion and other negative effects.<br><br>**Opportunities**<br>• Continue maintaining historic trails for safe visitor access.<br>• Partner with University of Arizona and other cooperating educational institutions for expanded geologic research.<br>• Improving visitor education regarding the prohibition against collecting may help reduce mineral theft.<br>• Rerouting a portion of the hailstone section of trail to protect rock formations.<br>• Identify geologic hazards prior to planning and design of park infrastructure. |
| **Existing Data and Plans Related to the FRV** | • *Evaluation of the Sensitivity of Inventory and Monitoring National Parks to Acidification Effects from Atmospheric Sulfur and Nitrogen Deposition – Sonoran Desert Network* (2011).<br>• Geologic resources inventory (2009).<br>• Chiricahua National Monument historic designated landscape National Register of Historic Places nomination form (2008).<br>• Weather and climate inventory (2007). |
| **Data and/or GIS Needs** | • Update lichen studies.<br>• Inventory locations and historic names of specific formations. |
| **Planning Needs** | • Resource stewardship strategy.<br>• Wilderness management plan. |
| **Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance** | **Laws, Executive Orders, and Regulations That Apply to the FRV**<br>• Paleontological Resources Protection Act<br>• Clean Water Act of 1972<br>• Clean Air Act<br>• American Indian Religious Freedom Act<br>• Religious Freedom Restoration Act<br>• Executive Order 13007, "Indian Sacred Sites"<br><br>**NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)**<br>• NPS *Management Policies 2006* (4.6.1, 4.6.2, 4.6.4, 4.8.1.1, 4.8.2)<br>• NPS *Natural Resource Management Reference Manual 77* |





| Fundamental Resource or Value | Native Flora and Fauna of the Madrean Sky Island Ecosystem |
|---|---|
| **Related Significance Statements** | Significance statement 2. |
| **Current Conditions and Trends** | **Conditions**<br>• Chiricahua National Monument is covered mostly with Madrean oak woodland and Madrean pine-oak forest, with some desert grassland in the western margin. There is a small area of riparian vegetation along canyon bottoms. Chiricahua National Monument is one of only three NPS areas that contain Madrean biota (the others are Coronado National Memorial and Guadalupe Mountains National Park).<br>• Although the park is a small percentage of the area of the Chiricahua Mountains, its 803 documented and strongly suspected plant taxa comprise about two-thirds of the estimated 1,200 taxa in the Chiricahua flora.<br>• Chiricahua National Monument has populations of the rare plants *Hexalectris warnockii* (Texas crested coralroot), *Graptopetalum bartramii* (Bartram Stonecrop), *Pectis imberbis* (beardless Chinch weed), and *Perityle cochisensis* (Cochise rock daisy). Rare vertebrates that are currently or were historically present are jaguar, lesser long-nosed bat, Mexican spotted owl, and Chiricahua leopard frog. The lists are probably incomplete.<br>• Generally, most fauna in the park are in good condition.<br>• The grassland in and adjacent to Chiricahua National Monument is mapped as native and the condition is unknown because there has been a dramatic loss of canopy cover from fire and from post-fire pestilence (Arizona cypress in particular).<br>• Nitrogen deposition warrants moderate concern based on NPS Air Resource Division benchmarks. The park's arid ecosystems may be highly sensitive to the nutrient enrichment and acidification effects from current deposition. Some invasive plant species thrive in areas with excess nitrogen deposition, displacing native vegetation adapted to low nitrogen conditions.<br>• Ground-level ozone warrants significant concern based on the NPS Air Resource Division benchmarks and threatens at least 14 ozone-sensitive plant species including *Pinus ponderosa* (ponderosa pine) and *Salix gooddingii* (Gooding's willow).<br>• The woodlands and forests away from heavily trafficked areas are presumed to be mostly healthy and are largely responding well post-fire, though often in a different regime than before the fire.<br><br>**Trends**<br>• Generally, the flora of the park is returning following the 2011 fire, but the composition has been significantly altered from pre-fire conditions.<br>• Generally, temperature indicators (June maximum temperature and January minimum temperature) were slightly above average compared to their respective reference conditions (30-year averages from 1971–2000). January minimum temperatures and June maximum temperatures from 2000–2004 were 1 degree Fahrenheit (°F) warmer than their respective 30-year averages. The precipitation indicator was below average compared to the 30-year average (1971–2000).<br>• For 2003–2012, the trend in the nitrogen deposition and ground-level ozone risk to vegetation health remained relatively unchanged. There was no recorded statistically significant trend. |

| Fundamental Resource or Value | Native Flora and Fauna of the Madrean Sky Island Ecosystem |
|---|---|
| **Threats and Opportunities** | **Threats**<br>• Sky Island ecosystems are vulnerable to future upslope shifts due to climate change. Increase in mean annual temperature projected for the region, including increases in storm frequency/intensity and drought events due to climate change could have major impacts on vegetation. Biological communities may shift upslope where suitable conditions for their existence occur, changing the habitat to make it more viable for some species and less so for others. Possible future changes in timing and amounts of precipitation, as well as loss or changes of vegetation, could result in flooding—putting people, ecosystems, and infrastructure at risk.<br>• Fire frequency in the region could increase up to 25% by 2100 due to climate change, increasing the vulnerability of flora and fauna.<br>• The US-Mexico border situation poses a threat to natural resources, which can be damaged by illegal immigration, narcotics smuggling, enforcement efforts, and related activities. Threats include increased fire risk, wildlife disturbance, habitat destruction or modification, increased noise and artificial light, spread of invasive species, trash and human waste, and creation of new roads and trails. Additionally, clearing undergrowth following the 2011 Horseshoe Fire makes the park an easier throughway for foot traffic.<br>• There are 62 nonnative species documented in the park, with another 20 species suspected present, but not confirmed. Several of these invasive species pose a significant threat to the park's natural resources including Lehmann lovegrass (management techniques can reduce its dominance), Maltese starthistle, Russian olive, watercress (may compete with water umbel if present), salt cedar, and bigleaf periwinkle (invasive in riparian habitats). The post-fire conditions of the 2011 Horseshoe Fire are more susceptible to the colonization and spread of invasive plant species.<br>• Neighboring land use could pose a threat to the park's natural resources. The park is not large enough to support a healthy, self-sustaining ecosystem indefinitely if isolated from larger landscapes. For example, the lack of a complete fenceline and the proximity of nearby grazing land results in cattle grazing incursions within the park.<br>• Many trees in the park are threatened by insect infestations such as cypress beetles in Arizona cypress.<br>• Loss of specimens and associated field records in the park's natural history collection due to lack of accountability, particularly for collections in nonfederal repositories, could lead to a loss of knowledge.<br><br>**Opportunities**<br>• Expand education and research opportunities following the 2011 Horseshoe Fire related to fires and other natural resource issues.<br>• Provide expanded education for surrounding communities and school groups, particularly related to the unique role that sky islands and dark night skies play in light of climate change and the charismatic fauna in the park such as coatimundis, large cats, and bears.<br>• Coordinate with management of the surrounding natural lands, mostly under US Forest Service management, particularly related to grazing, recreation, and fire.<br>• Identify ecosystems and plant communities most vulnerable to climate change and air quality impacts and devise management strategies accordingly.<br>• Reduce ecosystem vulnerability to climate change by mitigating air pollution stressors and increasing ecosystem resilience.<br>• Continue partnerships with multiple nongovernmental organizations such as the Sky Island Alliance, Arizona-Sonora Desert Museum, etc.<br>• Continue and expand bear management strategies, including education and outreach to visitors and partners about appropriate behavior and installation of more bear boxes at campgrounds.<br>• Continue conservation and outreach related to pollinators.<br>• Continue ecological restoration of natural plant communities throughout the park.<br>• Continue to document ecosystem shifts by appropriate collection and cataloging of specimens and associated field records. |

| Fundamental Resource or Value | Native Flora and Fauna of the Madrean Sky Island Ecosystem |
|---|---|
| **Existing Data and Plans Related to the FRV** | • Fire effects monitoring data collected periodically depending on years since last fire event.<br>• Species checklist (2014).<br>• *Landbird Monitoring Protocol and Standard Operating Procedures for the Chihuahuan Desert, Northern Great Plains, Sonoran Desert, and Southern Plains Networks* (2013).<br>• Natural resource condition assessment (2011).<br>• "Bat Species Richness and Abundance at Chiricahua National Monument and Fort Bowie National Historic Site" (2000–present).<br>• "Distribution and Status of Breeding Birds in the Sky Islands of Northern Sonora" (2011).<br>• Vascular plant and vertebrate inventory (2008).<br>• Southwest exotic mapping program (2007).<br>• "Conservation and Management of Jaguars, Mountain Lions, and other Felids in Four Southern Arizona Parks" (2006).<br>• Amphibian research and monitoring (2006).<br>• "Establishment of a Lichen Biomonitoring Program and Air Quality Baseline in Chiricahua National Monument and Fort Bowie National Historic Site" (1995–1996).<br>• Catalog records and associated field records (archives) for specimens and data in park's museum collection. |
| **Data and/or GIS Needs** | • Research post-fire ecosystem through assessments of vegetation, wildlife, and watershed.<br>• Identify ecological restoration needs and strategy.<br>• Complete comprehensive plant and wildlife inventory.<br>• Expand understanding of climate change through added weather stations and continuous collection of weather data (temperature, precipitation) to validate climate change over time. Work with tribes to complete a traditional environmental knowledge project to assist with management of natural resources.<br>• Invasive species monitoring and treatment.<br>• Complete comprehensive plant and wildlife inventory.<br>• Develop and implement research plan to identify and locate natural history collections and associated field records.<br>• Climate change vulnerability study of select flora and fauna species.<br>• Study to examine pollution dose-response relationships in sensitive park ecosystems.<br>• Assess impact of mercury and other toxics on biota in the park, including invertebrate insects, and understand ecosystem characteristics that enhance mercury methylation at the park. |
| **Planning Needs** | • Complete ecological restoration plan for the three SEAZ units.<br>• Resource stewardship strategy.<br>• Integrated pest management plan.<br>• Update scope of collections statement. |

| Fundamental Resource or Value | Native Flora and Fauna of the Madrean Sky Island Ecosystem |
|---|---|
| **Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance** | **Laws, Executive Orders, and Regulations That Apply to the FRV**<br>• Wilderness Act of 1964<br>• Endangered Species Act of 1973<br>• National Invasive Species Act of 1996<br>• Lacey Act of 1900<br>• Migratory Bird Treaty Act of 1918<br>• National Environmental Policy Act of 1969<br>• Federal Noxious Weed Act of 1974<br>• Clean Water Act of 1972<br>• Water rights adjudication and law<br>• The Clean Air Act (42 USC 7401 et seq.) gives federal land managers the responsibility for protecting air quality and related values, including visibility, plants, animals, soils, water quality, cultural resources, and public health, from adverse air pollution impacts<br>• Federal Cave Resources Protection Act of 1988<br>• Executive Order 12088, "Federal Compliance with Pollution Control Standards"<br>• Executive Order 13112, "Invasive Species"<br>• Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources"<br>• National Flood Insurance Program<br>• Management of Museum Properties Act of 1955<br>**NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)**<br>• NPS Director's Order 18: *Wildland Fire Management*<br>• NPS Director's Order 24: *NPS Museum Collections Management*<br>• NPS Director's Order 77-2: *Floodplain Management*<br>• NPS *Management Policies 2006* (1.6) "Cooperative Conservation Beyond Park Boundaries"<br>• NPS *Management Policies 2006* (4.1) "General Management Concepts"<br>• NPS *Management Policies 2006* (4.1.4) "Partnerships"<br>• NPS *Management Policies 2006* (4.4.1) "General Principles for Managing Biological Resources"<br>• NPS *Management Policies 2006* (4.6.1) "Protection of Surface Waters and Groundwaters"<br>• NPS *Management Policies 2006* (4.6.2) "Water Rights"<br>• NPS *Management Policies 2006* (4.6.4) "Floodplains"<br>• NPS *Management Policies 2006* (4.7.2) "Weather and Climate"<br>• NPS *Management Policies 2006* (4.9) "Soundscape Management"<br>• NPS *Management Policies 2006* (4.10) "Lightscape Management"<br>• NPS *Natural Resource Management Reference Manual 77*<br>• NPS *Reference Manual 18: Wildland Fire Management*<br>• Special Directive 93-4 "Floodplain Management, Revised Guidelines for National Park Service Floodplain Compliance" (1993) |

| Fundamental Resource or Value | Wilderness Character |
|---|---|
| **Related Significance Statements** | Significance statement 3. |
| **Current Conditions and Trends** | **Conditions**<br>• Eighty-six percent (10,290 acres) of the 11,985-acre park is congressionally designated wilderness. In general, the designated wilderness is in good condition, and natural processes largely continue unimpeded.<br>• The wilderness is surrounded on three sides by US Forest Service land and on one side by private land, with approximately 14.5 miles of wilderness boundary fenced to prevent livestock grazing incursions.<br>• A narrow paved corridor that includes the Bonita Canyon Road, Massai Point, Echo Canyon Trailhead and parking area, Sugarloaf parking lots, and other developed areas (visitor center, employee housing, maintenance yard, and campground) and Faraway Ranch are not part of the designated wilderness area.<br>• Nearly all of the park's development and most of its visitor activity occurs along Bonita Canyon Road. Trailheads leading into the wilderness also start along this stretch of road or at the parking lots in the park. Other than short administrative roads and an unpaved road leading to the King of Lead Mine, there are no other roads in the park. These roads essentially bisect the wilderness area.<br>• Noise and artificial light from the road and adjacent developed areas can travel many miles into the wilderness and negatively affect naturalness and opportunities for solitude and primitive recreation.<br>• The wilderness has an extensive, popular, and historic trail network. The maintained trails are generally in good condition, although they have seen some damage due to flooding. Due to the extensive trail network, a large percentage of visitors to the park visit the wilderness.<br>• The wilderness offers opportunities to experience unpolluted, clear views, dark night skies, and natural soundscapes, although the park does not offer backcountry camping within wilderness. Visitors can experience camping in the park's campground and extensively on adjacent land.<br><br>**Trends**<br>• Following the 2011 Horseshoe Fire, altered vegetation from the fire has changed access to the wilderness and increased flooding events.<br>• Dark night skies and natural sounds are stable, with consistent vehicle and aircraft overflight noise levels. Low flight helicopters (e.g., border patrol, military) have increased significantly. At night, unchanging levels of air pollution sometimes scatter artificial light, increasing the effect of light pollution on the night sky.<br>• There has been an increase in commercial use authorizations for guided horse and hiking tours.<br>• Visitation to both the park and its wilderness has dropped in recent years (though a similar percentage of visitors to the park today also visit the wilderness). |

| Fundamental Resource or Value | Wilderness Character |
|---|---|
| **Threats and Opportunities** | **Threats**<br>• Climate change poses an existential threat to all sky islands in the region, as well as within the Chiricahua Wilderness. If decreases in precipitation and changes to temperature, humidity, and seasonality continue, these changes will have major impacts on vegetation in the Sky Island region, and biological communities will shift upslope for more suitable conditions. The highest elevation plant communities may become extirpated from the park.<br>• Recent fires within the wilderness have changed how other threats affect the wilderness (i.e., changed vegetation post-fire is more susceptible to invasive species proliferation or additional impacts from a changing climate).<br>• Air quality indicators, including deposition and ozone, are impacted by international, regional, and local sources of air pollution such as agriculture, power plants, industry, oil and gas development, and urban sprawl.<br>• Undocumented aliens, drug smugglers, and law enforcement efforts and related activities can all degrade wilderness character. Associated threats and impacts may include increased fire risk, wildlife disturbance, habitat destruction or modification, increased noise and artificial light, spread of invasive species, trash, and human waste, and the creation of trails by migrants and/or law enforcement personnel. These activities may also impact the safety of visitors and staff at the park.<br>• Actions authorized by the park that intentionally manipulate the biophysical environment, such as the treatment of invasive plant species, threaten the untrammeled quality of wilderness character (although these management actions may be necessary to protect and enhance other qualities of wilderness character).<br>• Grazing incursions sometimes resulting from the alteration or cutting of the park's border fence by undocumented migrants and drug smugglers. Cattle grazing manipulates the biophysical environment, alters vegetation, and leads to the spread of invasive species as seeds are deposited into the soil through cow manure.<br>• The park's wilderness abuts adjacent legal hunting areas, so poaching (both intentional and unintentional) may occur within the wilderness.<br>• Although the wilderness is mostly free from modern human development, there are a few nonrecreational structures, installations, and developments. These structures include the Sugarloaf Mountain Fire Lookout, trails, signs, etc.<br>• There is a significant amount of fencing on the park and wilderness boundaries. While the fencing often prevents illegal grazing incursions, the use of fencing prevents the movement of other animals and exists as a modern human development on the landscape.<br>• The King of Lead Mine in the northeastern corner of the wilderness degrades and threatens the undeveloped quality of the wilderness. Approximately 2.5 acres of the mine is in the wilderness area, and an unpaved road stemming from Bonita Canyon Road currently bisects the wilderness. In the future, mining may resume at greater intensities.<br>• The solitude or primitive and unconfined recreation quality may be threatened by increased noise from vehicles and aircraft, light pollution from development, human-made impediments on the viewshed, and lack of overnight experiences within the park's wilderness.<br>• Visitation to the wilderness may negatively impact the natural quality, through soil compaction and erosion from social trails, horse use, and commercial use authorizations for guided horse and hiking tours.<br><br>**Opportunities**<br>• Continue advertising and raising awareness regarding the park's wilderness adjacency to US Forest Service lands and wilderness area to allow increased opportunities for access and nearby overnight camping and backpacking according to NPS policy.<br>• Continue the park's strong relationship with the US Forest Service. |

| Fundamental Resource or Value | Wilderness Character |
|---|---|
| **Threats and Opportunities** | **Opportunities (continued)**<br>• Potentially discuss allowing overnight camping within wilderness. This is a typical opportunity offered in most wilderness areas, and visitors often inquire about this opportunity.<br>• Increase education related to border activities within the wilderness to increase awareness and help protect visitors. This could be done at the visitor center or through other media outlets.<br>• Partner with local hiking and equestrian groups regarding volunteering for projects within the wilderness and education of visitors about Chiricahua Wilderness, Leave No Trace, etc.<br>• Pursue citizen science projects and partnerships with universities for research within the wilderness.<br>• Seek recognition as a Dark Night Sky Park and a Climate Friendly Park, as appropriate. Expand these programs to work with local communities to help uphold and strengthen these designations.<br>• Continue developing commercial use authorizations and special use permit program in place at the park.<br>• Work to minimize or eliminate visual intrusions to the wilderness from government buildings. |
| **Existing Data and Plans Related to the FRV** | • Night skies artificial light ratio model (2015).<br>• Geospatial impact model (2015).<br>• *A Wild Place on the Frontier: Wilderness Building Blocks for Chiricahua National Monument (2012).*<br>• Land protection plan (1987).<br>• Studies related to wilderness (1973). |
| **Data and/or GIS Needs** | • Information on visitor wilderness use.<br>• Assess demand and impacts of potential camping in the wilderness.<br>• Continue monitoring commercial use.<br>• Night sky monitoring. |
| **Planning Needs** | • Wilderness management plan.<br>• Resource stewardship strategy. |
| **Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance** | **Laws, Executive Orders, and Regulations That Apply to the FRV**<br>• Wilderness Act of 1964<br>• Clean Air Act of 1977<br>• Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources"<br>**NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)**<br>• NPS *Management Policies 2006* (Chapter 6) "Wilderness Preservation and Management"<br>• NPS *Management Policies 2006* (5.3.1.7) "Cultural Soundscape Management"<br>• Director's Order 41: *Wilderness Stewardship*<br>• Director's Order 47: *Soundscape Preservation and Noise Management*<br>• NPS *Reference Manual 41: Wilderness Stewardship*<br>• NPS *Keeping It Wild in the National Parks User Guide* |

| Fundamental Resource or Value | Scenic Views and Air Quality |
|---|---|
| **Related Significance Statements** | Significance statements 2 and 3. |
| **Current Conditions and Trends** | **Conditions**<br>• Chiricahua National Monument is designated as a class I area under the Clean Air Act (see appendix C for more information).<br>• Views and scenery are one of the main reasons people visit the park, as supported by regular visitor use surveys.<br>• The rhyolite columns in the Wonderland of Rocks and the broad expanses of the Massai Plateau provide spectacular opportunities to develop landscape views for visitors.<br>• Bonita Canyon Highway was designed to showcase many of the rhyolite columns and spires that populate the upper reaches of the canyon. In the 1960s for safety resources, the National Park Service developed automobile turnouts along the highways so visitors could stop their cars and photograph those features.<br>• The highway terminates on the high plateau of Massai Point and gives the visitor an almost 180-degree view of the heart of the park. These 180-degree views are also available at Sugarloaf Mountain. In many directions views extend well beyond the boundaries of the park, to adjacent National Forest lands and private lands.<br>• Scenic views in the park are sometimes obscured by pollution-caused haze and smoke from nearby fires. Visibility warrants moderate concern based on NPS Air Resource Division benchmarks.<br>**Trends**<br>• For 2003–2012, the trends in visibility ozone concentration, total wet nitrogen concentrations, and wet sulfur concentrations have remained relatively unchanged at the park monitor.<br>• Current drought has increased dust storms, lowered the water table, and changed surface vegetation, resulting in increased particulates affecting the air quality.<br>• Nitrogen oxide emission reductions from the coal-fired power plants as well as sulfur dioxide emission reductions from copper smelters are required by the Regional Haze Reduction Program by 2018 from the protection of Chiricahua National Monument and other regional class I areas, which will improve air quality conditions at the park. |

| Fundamental Resource or Value | Scenic Views and Air Quality |
|---|---|
| **Threats and Opportunities** | **Threats**<br>• Changing fire regimes and associated plant communities could change the views from the park.<br>• Park development, such as potential trailer pads or solar panels, could impact scenic views if not sited correctly.<br>• Current or potential development outside the park could negatively impact views such as energy developments (solar fields, transmission lines, gas lines), industrial mines, or other development.<br>• Air quality and scenic resources are impacted by international, regional, and local sources of air pollution such as agriculture, power plants, industry, oil and gas development, and urban sprawl.<br>• Increase in mean annual temperature projected for the region, including increases in drought events due to climate change, will probably continue to increase dust storms, lower the water table, and change surface vegetation. Fire frequency is projected to increase up to 25% by 2100 due to climate change, which could result in an increase in particulates affecting air quality.<br>• The predicted concentrations of methylmercury in surface waters in the Sonoran Desert Network range from very low to very high. Concentrations of toxic pollutants are affected by the byproducts of coal-fire combustion, municipal incineration, and mining operations.<br>• Some developments near the air quality monitoring station (including water tanks and a house) may affect the accuracy of the readings from the station.<br>**Opportunities**<br>• Work cooperatively with other federal and state air quality agencies and local stakeholders to potentially reduce air quality impacts in parks from sources of air pollution. Partnering with potential nearby developers or planners could similarly increase awareness about the importance of air quality and scenic views in the park.<br>• Use interpretive and educational tools to communicate the connections between air pollution, scenic views, biodiversity, wilderness, night sky, park resources, and climate change. Emphasize scenic views and the connection to the other two NPS units in Cochise County to increase visitation.<br>• Integrate and interpret sensitive park development to protect scenic views (e.g., the use of natural or compatible materials and colors that harmonize with the natural environment, lower profile shelters, etc.).<br>• Include "Air Resources in National Parks," free 1-hour training course (Department of the Interior), in employee training plans to emphasize the importance of air quality to the park's resources.<br>• Potentially investigate strategic land acquisitions, such as near the park entrance, to protect incursions by development on scenic vistas.<br>• Partner with several nearby communities to promote the parks and in turn bring economic input into those communities.<br>• A web cam could offer virtual viewing for those who cannot visit the park.<br>• Gather and use visitation demographics from surrounding communities. |
| **Existing Data and Plans Related to the FRV** | • Park air quality monitoring including ozone, deposition, and visibility (ongoing).<br>• "Air Quality Conditions and Trends by NPS Units: Chiricahua National Monument" (2012).<br>• *Air Quality Monitoring Protocol and Standard Operating Procedures for the Sonoran Desert, Southern Plains, and the Chihuahuan Networks* (2011).<br>• Gaseous air pollutant monitoring network annual data summary.<br>• Land protection plan (1987). |

| Fundamental Resource or Value | Scenic Views and Air Quality |
|---|---|
| **Data and/or GIS Needs** | • Continued monitoring from air quality station.<br>• Visual resource inventory.<br>• Night sky monitoring.<br>• Expand understanding of climate change through added weather stations and continuous collection of weather data (temperature, precipitation) to validate climate change over time. |
| **Planning Needs** | • Design guidelines for sensitive and compatible park development.<br>• Resource stewardship strategy.<br>• Viewshed management plan. |
| **Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance** | **Laws, Executive Orders, and Regulations That Apply to the FRV**<br>• The Clean Air Act (42 USC 7401 et seq.) gives federal land managers the responsibility for protecting air quality and related values, including visibility, plants, animals, soils, water quality, cultural resources, and public health, from adverse air pollution impacts<br>**NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)**<br>• NPS *Management Policies 2006* (1.4) "Park Management"<br>• NPS *Management Policies 2006* (1.6) "Cooperative Conservation Beyond Park Boundaries"<br>• NPS *Management Policies 2006* (3.1) "General"<br>• NPS *Management Policies 2006* (4.7) "Air Resource Management"<br>• NPS *Natural Resource Management Reference Manual 77* |

| Fundamental Resource or Value | Faraway Ranch Historic District |
|---|---|
| **Related Significance Statements** | Significance statement 4. |
| **Current Conditions and Trends** | **Conditions**<br>• A significant number of buildings and structures dating from the homesteading, ranching, and guest ranch periods are present. Some are restored and in good condition. The main house, which represents several stages of growth and use during its occupation by the Erickson and Riggs families, is restored and in good condition. The main floor is furnished and equipped with authentic possessions of the families.<br>• The exterior of the buildings are maintained regularly and appear in good condition.<br>• Overall, the condition of the entire district could be considered fair, as there are several cases of deterioration or maintenance that the park is currently working to remedy.<br>• There are a significant number of historic and prehistoric archeological sites in the historic district. Among these are lithic scatters, remains of the Buffalo Soldiers camp, and historical archeological sites such as privies and foundations of nonextant structures.<br>• Over time, the death of the grid of fruit trees and the encroachment of shrubs has diminished the integrity of the historic orchard. Only a few remnant persimmon and apricot trees remain.<br>• The Faraway Ranch Historic District is one of the primary visitor destinations in the park, and the only area where an interpretive program is regularly offered. Visitors are led through the main floor on interpretive tours. Two of the outbuildings are also open to visitors: Neil's Den, and the deteriorating tack shed and barn. However, many of the exhibits in this area are outdated.<br>**Trends**<br>• The historic district continues to experience symptoms of aging and weathering.<br>• The historic vegetation of the district is declining rapidly. The orchard has not been tended for many years and is in a poor state, with most of the trees missing or obscured by other vegetation.<br>• According to the park's collection condition survey, the objects exhibited at Faraway Ranch are in a state of continued degradation.<br>• Visitors continue to show a steady interest in ranger-led tours of the ranch house.<br>• The park previously had an interpretive and maintenance position focused solely on the historic district, but this has been discontinued.<br>• In 2001, the Resource Management offices at Faraway Ranch were relocated away from the Cowboy House and Quarters 29 due to a mice infestation. Quarters 29 has since been rehabbed and is now used for staff housing. |
| **Threats and Opportunities** | **Threats**<br>• Pests such as termites, carpenter ants, rodents, and squirrels pose a threat to the structures remaining within the historic district and objects on exhibit in the Faraway Ranch buildings. For example, pests have caused significant damage to the historic mantle within the ranch house.<br>• Increase in mean annual temperature projected for the region, including increases in storm frequency/intensity and drought events due to climate change, could accelerate weathering and erosion/sedimentation of historic structures and landscapes from storm events and an increase in invasive species and pests.<br>• Fire frequency in the region could increase up to 25% by 2100, increasing the vulnerability of historic structures. |

| Fundamental Resource or Value | Faraway Ranch Historic District |
|---|---|
| **Threats and Opportunities** | **Threats (continued)**<br>• Continued natural weathering and use for interpretation will cause gradual deterioration. Additionally, sunlight and natural conditions continue to deteriorate exhibits at Faraway Ranch.<br>• The historic vegetation of the district is declining rapidly. The orchard has not been tended for many years and is in poor condition, with most of the trees missing or obscured by other vegetation.<br>• Fires have the potential to permanently damage the remaining resources of the district. The water supply is insufficient for fighting a structural fire.<br>• Visitors knowingly or unknowingly illegally collect objects from within the district.<br>• While Faraway Ranch is considered a collections facility or museum, there are environmental threats to the collections in the buildings (i.e., fire, flood, natural deterioration).<br><br>**Opportunities**<br>• Reinstate the Faraway Ranch as a major part of the visitor experience and promote it as a premier destination at the park.<br>• Recognize, preserve, maintain, and interpret important landscape resources from the period of significance.<br>• Maintain and, when possible and desirable, reestablish vegetation that defined the landscape during the period of significance (e.g., juniper, orchard, grasses, etc.). Consider working with volunteers to assist with the maintenance of the historic orchard.<br>• Consider using original orchard cuttings to grow trees for transplant.<br>• Consider ways to interpret the processes of ecological and cultural landscape change over time in Bonita Canyon.<br>• Consider ways to include interpretive examples and perspectives from diverse points of view, incorporating stories of the Chiricahua Apaches, pioneer settlers, Buffalo Soldiers and ranchers, as recommended by the 2012 long-range interpretive plan and 2013 cultural landscape report.<br>• Develop a rotation plan for the collections on public display. This would allow visitors the opportunity to view more artifacts and would allow the park to better preserve sensitive artifacts.<br>• Reproductions can replace delicate objects that are currently on display to reduce safety risks as well as maintain a quality visitor experience.<br>• Consider ways to present the complementary histories of Chiricahua National Monument and Faraway Ranch.<br>• Include historic vegetation resources, especially historic trees, in fire management planning.<br>• Evaluate visitor circulation routes and location of orientation information and signage. To improve visitor experience, arrange for visitors to arrive at the ranch as guests would have traditionally arrived, rather than the current approach from the back of the house. Additionally, visitors often arrive at the Faraway Ranch District before they visit the visitor center, many times without a ranger to greet them. The addition of an interpretive sign at the gate with some additional information would improve visitor experience.<br>• Develop an information management system to track all resources found within the Faraway Ranch Historic District. Existing collections of primary material and considerable excellent secondary material should be made easily available to park staff for purposes of management and interpretation.<br>• Increase living history as a type of interpretation at the site.<br>• Increase staffing at the site, potentially through volunteers or as a sales outlet for Western National Parks Association.<br>• Update or remove the interpretive kiosk in Neil's Den. |

| Fundamental Resource or Value | Faraway Ranch Historic District |
|---|---|
| **Existing Data and Plans Related to the FRV** | • Collection condition survey (2014).<br>• Cultural landscape report – Faraway Ranch (2013).<br>• Cultural landscapes inventory – Faraway Ranch (2010).<br>• Faraway Ranch special history study (2006).<br>• *A Pioneer Log Cabin in Bonita Canyon: The History of the Stafford Cabin (1994).*<br>• General development plan – Faraway Ranch (1987).<br>• Interior collection management system records. |
| **Data and/or GIS Needs** | • Complete collection condition survey. |
| **Planning Needs** | • Comprehensive site plan for Faraway Ranch Historic District.<br>• Collections management plan.<br>• Resource stewardship strategy.<br>• Develop evacuation plan for museum collections.<br>• Develop plan to complete conservation treatments for items on exhibit at Faraway Ranch. |
| **Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance** | **Laws, Executive Orders, and Regulations That Apply to the FRV**<br>• Antiquities Act of 1906<br>• Historic Sites Act of 1935<br>• National Historic Preservation Act of 1966, as amended (54 USC §300101 et seq.)<br>• Archeological and Historic Preservation Act of 1974<br>• Archaeological Resources Protection Act of 1979<br>• Management of Museum Properties Act of 1955<br>• Executive Order 11593, "Protection and Enhancement of the Cultural Environment"<br>• Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources"<br>• "Curation of Federally-Owned and Administered Archaeological Collections" (36 CFR 79)<br>• "Protection of Historic Properties" (36 CFR 800)<br>**NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)**<br>• Director's Order 24: *NPS Museum Collections Management*<br>• Director's Order 28: *Cultural Resource Management*<br>• Director's Order 28A: *Archeology*<br>• *The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation*<br>• "Department of the Interior Policy on Consultation with Indian Tribes"<br>• NPS *Management Policies 2006* (chapter 5) "Cultural Resource Management" |

| Fundamental Resource or Value | CCC Structures and Landscapes |
|---|---|
| **Related Significance Statements** | Significance statement 4. |
| **Current Conditions and Trends** | **Conditions**<br>• Most CCC-constructed facilities built between 1934 and 1940 are still present and functional in the park landscape today. Many of the buildings are still used for visitor or administrative use.<br>• Construction materials for the CCC buildings were collected from the local landscape and constructed in the NPS rustic architectural style, which emphasized harmonizing built facilities with the natural environment.<br>• In general, the integrity of the buildings and structures is high. The original design styles, construction techniques, and materials are readily apparent.<br>• Written documentation has been completed for the trails and roads, and the buildings undergo yearly condition assessments.<br>• The Bonita Canyon Highway was designed and constructed by the Bureau of Public Roads under the supervision of the US Forest Service between 1932 and 1934. Between 1934 and 1940, CCC crews made significant changes and improvements to the roadway, devoting more work hours to the highway than to any other project in the park. Work accomplished by CCC enrollees dramatically improved the condition and stability of the road. A condition survey was recently performed on the road.<br>• The early trail system built by Ed Riggs in the late 1920s was reused when he and CCC enrollees rebuilt the trail system between 1934 and 1939. The CCC trail system consists of 1 short foot trail and 12 major hiking trails that are linked together to create a series of smaller and larger loops.<br>• The integrity of the individual trails at the park is high, and the large-scale design of the trail system is essentially unaltered. Most of the trails are in good to great condition, although others are closed and impassable due to significant loss of the CCC fabric from flood damage.<br>• CCC development of Massai Point was within easy walking distance of the roadway loop and parking area marking the terminus of Bonita Canyon Highway. Two clusters of development within the site remain from the CCC era. Speakers Rock and a short foot trail form one cluster. The Orientation Station cluster includes a short footpath, stair, terrace, and the Massai exhibit building. The integrity of the Massai Point area is high with minimal intrusions such as a nature trail, short accessible trail, and a modern restroom.<br>• The visitor center cluster has a history of significant modification since its first development by CCC enrollees in 1935. This area now contains a modern restroom, a visitor center composed of multiple components from different periods, a short footpath, and parking area. The original building and all but the last addition were constructed by CCC enrollees between 1934 and 1940.<br>• The explosives cluster includes the first and second cap magazines and the powder magazine, used for blasting rock for construction. Integrity of the powder magazine is very good. The first cap magazine is in a state of partial ruin; its integrity is fair. The integrity of the second cap magazine is very good.<br>• The campground (loop road, camp units, and two buildings) was constructed in 1934 and 1935. The integrity of the CCC structures at the campsite remains very good.<br>• The Sugarloaf Lookout and its support elements were constructed in 1934 and 1935 by the CCC, including a secondary access road, trail, and building. The integrity of this site is good, and has undergone limited modification since its completion in 1939.<br>• Additionally, there are four buildings in the maintenance area constructed by the CCC in 1936 and 1940 (equipment shed, warehouse, power house and laundry, and gasoline and oil house). Despite modern additions to this area, the integrity of the site and its resources is still good. |

| Fundamental Resource or Value | CCC Structures and Landscapes |
|---|---|
| **Current Conditions and Trends** | **Conditions (continued)**<br>• The CCC constructed three residences and one cold cellar in the residential area. The residences have been in continuous use as housing for seasonal or permanent NPS employees since their construction. The integrity of these structures is good.<br>**Trends**<br>• Structures are susceptible to continued NPS administrative use but are monitored and maintained regularly.<br>• Surveys indicate that the condition of the park roads and trails has degraded over time. Rainstorms, fires, and long-term horse and foot traffic have eroded trails and damaged individual features. |
| **Threats and Opportunities** | **Threats**<br>• Flooding and fire, and resulting erosion, can impact roads and trails.<br>• Continued regular hiking and horse-use on trails has resulted in erosion and some damage to structures along the trails. Additionally, discouraged behaviors such as trail cutting and social trails leads to erosion and trampling of vegetation. Damage could include causing initial damage or exacerbating existing damage (such as to retaining walls).<br>• Continued staff administrative use results in normal wear and tear over time.<br>• Adjustments to historic structures to accommodate modern vehicles or modern technological needs or conveniences (i.e., exchanging cedar posts for plastic in the campground, addition of bear boxes for visitor safety, life stations, and discussions of conveniences like hammock stands).<br>• Uncertain but potential effects from climate change include acid deposition or changing in precipitation and flooding and fire events.<br>• Continued lack of adequate funding to address upkeep of trails and structures.<br>**Opportunities**<br>• Increase interpretation and activities related to CCC history, structures, and landscapes.<br>• Increased involvement with living CCC alumni, or families of CCC alumni, to record oral histories.<br>• Participate in activities with other parks and sites that had CCC involvement (i.e., Colossal Cave and Saguaro National Park). |
| **Existing Data and Plans Related to the FRV** | • "Assistance with Preparing Documentation of Historic CCC Trails at Chiricahua National Monument" (2009).<br>• Chiricahua National Monument historic designated landscape National Register of Historic Places nomination (2008).<br>• "Intermountain Region New Deal Resources: Research Findings for Chiricahua National Monument" (2008).<br>• Cultural landscapes inventory – historic designed landscape (2008).<br>• "CCC Structures at Chiricahua National Monument NRHP DOE" (2005).<br>• "A Narrative History of the Civilian Conservation Corps at Chiricahua National Monument" (2001). |
| **Data and/or GIS Needs** | • Oral histories of living CCC alumni.<br>• Assessment inventory of all the CCC structures and consolidate all information.<br>• Completion of park administrative history.<br>• Update List of Classified Structures database and condition assessments for CCC structures.<br>• Complete file plan to set up structure for data management for museum collections.<br>• Conduct archives survey. |

| Fundamental Resource or Value | CCC Structures and Landscapes |
|---|---|
| **Planning Needs** | • Wilderness management plan.<br>• Resource stewardship strategy.<br>• Preservation management plan for CCC resources.<br>• Historic structure reports for CCC structures.<br>• Cultural landscape report for historic designed/CCC landscape.<br>• Site planning for CCC-designed landscape district.<br>• Develop evacuation plan for museum collections.<br>• Update scope of collections statement. |
| **Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance** | **Laws, Executive Orders, and Regulations That Apply to the FRV**<br>• Antiquities Act of 1906<br>• Historic Sites Act of 1935<br>• National Historic Preservation Act of 1966, as amended (54 USC §300101 et seq.)<br>• Archeological and Historic Preservation Act of 1974<br>• Archaeological Resources Protection Act of 1979<br>• Management of Museum Properties Act of 1955<br>• Executive Order 11593, "Protection and Enhancement of the Cultural Environment"<br>• Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources"<br>• "Curation of Federally-Owned and Administered Archaeological Collections" (36 CFR 79)<br>• "Protection of Historic Properties" (36 CFR 800)<br>**NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)**<br>• Director's Order 24: *NPS Museum Collections Management*<br>• Director's Order 28: *Cultural Resource Management*<br>• Director's Order 28A: *Archeology*<br>• *The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation*<br>• NPS *Management Policies 2006* (chapter 5) "Cultural Resource Management" |

| Fundamental Resource or Value | Archeological and Ethnographic Resources |
|---|---|
| **Related Significance Statements** | Significance statements 4 and 5. |
| **Current Conditions and Trends** | **Conditions**<br>• Generally, the ethnographic resources at the park are not well understood by park staff.<br>• Groups traditionally associated with the Pinnacles and the surrounding area include the Fort Sill Apache Tribe, Jicarilla Apache Tribe, San Carlos Apache Tribe, Hopi Tribe, Mescalero Apache Tribe, Pascua Yaqui Tribe, Tohono O'Odham Nation, Tonto Apache Tribe, White Mountain Apache Tribe, and Zuni Tribe.<br>• Archeological and documentary evidence shows that the Chiricahua Apaches used this area as part of their home range during Spanish, Mexican, and later American historic periods. Both precontact and historic sites exist in the park. Most of the sites are in fair to good condition, with a few that are threatened.<br>• Pedestrian survey has been conducted by University of New Mexico and NPS archeologists for more than 40% to 60% of the park.<br>• The Chiricahua Apaches viewed the park area as a sacred site and would travel to the Wonderland of Rocks to listen to the voices of departed family members. They used Bonita Canyon as an east-west transportation route and the local environment to procure essential resources for survival.<br>• The Chiricahua Apaches were permanently removed from the area in 1886, although Chiricahua Apache descendants now periodically return to the area to reacquaint themselves with the historic landscape.<br>• Some sites have extensive resources (lithic scatters, pictographs and petroglyphs, use of alcoves in caves, hunting/game nets, some agave roasting pits), which indicate seasonal occupation over long periods of time.<br>• Periodically, Chiricahua Apaches place requests for traditional use of the park.<br>**Trends**<br>• The majority of the sites are relatively stable but deteriorating over time due to weathering and other natural factors and processes.<br>• A few of the known archeological sites are threatened by erosion and exposure, but are in the process of being stabilized and undergoing data recovery.<br>• Recent archeological surveys have dramatically increased the number of known sites. |

| Fundamental Resource or Value | Archeological and Ethnographic Resources |
|---|---|
| **Threats and Opportunities** | **Threats**<br>• Some archeological sites have been exposed due to loss of vegetation and erosion following the 2011 Horseshoe Fire. While this aided in the identification and study of those sites, it also increases the vulnerability of those sites to deterioration through natural processes.<br>• Increase in mean annual temperature projected for the region, including increases in storm frequency/intensity and drought events due to climate change could accelerate erosion/sedimentation of archeological sites from storm events and increase invasive species.<br>• Fire frequency in the region could increase up to 25% by 2100, increasing the vulnerability of archeological sites.<br>• Cattle grazing incursions from neighboring grazing lands could result in trampling of sites.<br>• Lack of documentation can result in loss of park resources through neglect.<br>• Limited understanding of archeological sites and ethnographic resources, as well as limited extent discovered, makes it difficult to fully understand the story of the Chiricahua Apaches and inhibits effective interpretation of these resources.<br>**Opportunities**<br>• Continue and expand collaboration with traditionally associated tribes to better understand and interpret archeological and ethnographic resources and the Apache people and their lifeways.<br>• Expand education efforts for visitors related to archeological and ethnographic tribes.<br>• Educate visitors on a topic not well known by park visitors or the general public.<br>• Continue partnership with the University of New Mexico for archeological surveys.<br>• Continue data collection efforts on exposed archeological sites.<br>• Create briefs or documents to guide effective interpretation of ethnographic and archeological resources. |
| **Existing Data and Plans Related to the FRV** | • "Ethnographic Overview and Assessment of Chiricahua National Monument and Fort Bowie National Historic Site" (2010).<br>• Paleontological resource inventory and monitoring – Sonoran Desert Network (2008).<br>• "Overview of Previous Archaeological Work at Fort Bowie National Historic Site and Chiricahua National Monument" (2005).<br>• *An Aboriginal Basket from Chiricahua National Monument* (1981). |
| **Data and/or GIS Needs** | • Develop better understanding of ethnographic resources.<br>• Continue archeological surveys.<br>• Continue monitoring archeological sites.<br>• Documentation of cultural uses in caves/alcoves.<br>• Climate change vulnerability assessment of select archeological resources.<br>• Develop evacuation plan for museum collections. |
| **Planning Needs** | • Preservation plan for archeological and ethnographic resources.<br>• Resource stewardship strategy.<br>• Finalize plan of action for NAGPRA and inadvertent discoveries. |

| Fundamental Resource or Value | Archeological and Ethnographic Resources |
|---|---|
| **Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance** | **Laws, Executive Orders, and Regulations That Apply to the FRV**<br>• Antiquities Act of 1906<br>• Historic Sites Act of 1935<br>• National Historic Preservation Act of 1966, as amended (54 USC §300101 et seq.)<br>• Archeological and Historic Preservation Act of 1974<br>• American Indian Religious Freedom Act of 1978<br>• Archaeological Resources Protection Act of 1979<br>• Native American Graves Protection and Repatriation Act of 1990<br>• Management of Museum Properties Act of 1955<br>• Religious Freedom Restoration Act of 1993<br>• Paleontological Resource Protection Act of 1999<br>• Executive Order 11593, "Protection and Enhancement of the Cultural Environment"<br>• Executive Order 13007, "Indian Sacred Sites"<br>• Executive Order 13175, "Consultation and Coordination with Indian Tribal Governments"<br>• Secretarial Order 3206, "American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act"<br>• Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources"<br>• "Curation of Federally-Owned and Administered Archaeological Collections" (36 CFR 79)<br>• "Protection of Historic Properties" (36 CFR 800)<br>**NPS Policy-level Guidance (NPS *Management Policies 2006* and Director's Orders)**<br>• Director's Order 24: *NPS Museum Collections Management*<br>• Director's Order 28: *Cultural Resource Management*<br>• Director's Order 28A: *Archeology*<br>• *The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation*<br>• "Department of the Interior Policy on Consultation with Indian Tribes"<br>• NPS *Management Policies 2006* (4.2.1) "NPS-conducted or –sponsored Inventory, Monitoring, and Research Studies"<br>• NPS *Management Policies 2006* (4.4.1.1) "Plant and Animal Population Management Principles"<br>• NPS *Management Policies 2006* (4.4.2) "Management of Native Plants and Animals"<br>• NPS *Management Policies 2006* (chapter 5) "Cultural Resource Management" |

# Appendix C: Inventory of Special Mandates, Special Designations, and Administrative Commitments

## Special Mandates

**Designation of the Chiricahua National Monument Wilderness (Public Law 94-567, 90 Stat. 2692) (October 20, 1976).**

In 1976, Congress designated a large portion of the park a wilderness as part of the National Wilderness System. With the addition in 1984, 10,290 acres is now designated wilderness. A narrow corridor that includes the main park road, Massai Point, Echo Canyon, and Sugarloaf parking lot, developed areas (visitor center, employee housing, maintenance yard, and campground), and Faraway Ranch is not included as part of the wilderness. The unpaved road to King of Lead Mine is also excluded.

The Chiricahua National Monument Wilderness is surrounded on three sides by US Forest Service land and on one side by private land. Approximately eight miles of wilderness boundary is fenced to prevent cattle from entering. Coronado National Forest, which comprises most of the Chiricahua Mountains, contains a designated wilderness area approximately 6 miles south of the park.

As part of the national wilderness system, these lands are administered "for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness." The National Park Service will strive to manage the wilderness to perpetuate natural processes and minimize human impacts. The only visitor facilities provided are trails. No motorized vehicles or camping are permitted. Only those signs needed for visitor safety and guidance are allowed.

**Designation of Chiricahua National Monument as a Clean Air Act Class I Area**

A major purpose of the Clean Air Act is "[T]o preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value" (Public Law 88-206; 42 USC 7470[2]). Accordingly, the 1977 amendments designated certain public lands as "class I" areas, which included national parks more than 6,000 acres and national wilderness areas more than 5,000 acres that were in existence when the amendments were enacted. Class I status is the highest level of air quality protection under the Clean Air Act and bestows an "affirmative responsibility" on the federal land managers to protect these areas from the adverse effects of air pollution. The goals of the act aim to protect visibility (i.e., scenery) and other resources sensitive to air pollution, including vegetation, animals, soils, and water in these special areas. In section 169A, Congress declared as a national goal the prevention of any future, and the remedy of any existing, visibility impairment in mandatory class I federal areas where impairment results from human-made air pollution.

**Master Agreement with Mexico**

In 1996, a letter of agreement was made between *Reserva Forestal Nacional y Refugio de Fauna Silvestre Sierra de los Ajos, Buenos Aires y La Purica – Bavispe,* Chiricahua National Monument, and Coronado National Memorial for the purpose of initiating a partnering project to promote the sharing of staff and resources. The primary goal among the three areas is conservation of natural and cultural resources across borders.

## Special Designations

**National Historic District**

The Faraway Ranch and Stafford Cabin are listed in the National Register of Historic Places as a historic district. The entire district includes eight ranch buildings and a cemetery. The National Historic Preservation Act requires the National Park Service to ensure that any federally funded or licensed undertaking is implemented only after careful consideration of its possible impacts on properties listed in the national register.

### Historic Designed Landscape

In 2008, approximately 10,000 acres of Chiricahua National Monument was designated a historic designed landscape under several criteria of the National Register of Historic Places. The landscape includes 48 contributing buildings (16), sites (7), structures (24), and objects (1). The period of significance is 1924 to 1940, highlighting the contributions of Edward Murray Riggs and the Civilian Conservation Corps.

## Administrative Commitments

| Title/Agency/ Organization | Purpose/Description | Expiration Date | Responsible Party |
|---|---|---|---|
| **Memorandums of Understanding** | | | |
| Cooperative national security and counterterrorism efforts on federal lands along the US border | Strengthen coordination related to border security. Signed in 2006. | No expiration | US Department of Homeland Security, US Department of the Interior, and US Department of Agriculture |
| Cooperation for wilderness conservation | Advanced cooperation for the management, planning, preservation, and research for the conservation of wilderness areas of the United States, Mexico, and Canada. Signed in 2009. | No expiration | National Park Service, US Fish and Wildlife Service, Bureau of Land Management, US Forest Service, Office of Ecosystem Services and Markets, Secretariat of the Environment and Natural Resources (United Mexican States), Parks Canada Agency of the Government of Canada |
| The national trails system memorandum of understanding | Long-term interagency coordination and cooperation under the authorities of the National Trails System Act to enhance visitor satisfaction, coordinate trailwide administration and site-specific management, protect resources, promote cultural values, foster cooperative relationships, share technical expertise, and fund lands and resources associated with National Trails. Agreement 06-SU-11132424-196. | 2016 | Bureau of Land Management, National Park Service, US Fish and Wildlife Service, US Forest Service, US Army Corps of Engineers, Federal Highway Administration |
| Memorandum of understanding among National Park Service Chiricahua National Monument, Fort Bowie National Historic Site, Coronado National Memorial, and State of Arizona Cochise County Sheriff | To establish the terms and conditions under which parties will provide mutual law enforcement assistance in and near SEAZ units. | 2017 | Cochise County Sheriff's Office |

| Title/Agency/ Organization | Purpose/Description | Expiration Date | Responsible Party |
|---|---|---|---|
| **Memorandums of Understanding** | | | |
| Memorandum of understanding between Chiricahua National Monument / Fort Bowie National Historic Site and The Bowie Chamber of Commerce | For maintenance of interpretive displays and area adjacent to the kiosk in the town of Bowie. | No expiration | The Bowie Chamber of Commerce and National Park Service |
| **Memorandums of Agreement** | | | |
| Joint management for Southeast Arizona Parks | Concurrent jurisdiction for all three SEAZ parks. | No expiration | National Park Service |
| **Interagency Agreements** | | | |
| Joint fire management | Joint fire operations in a 5,300-acre zone of cooperation just outside and adjacent to the park; includes modifications providing NPS funding for preparedness, fuels reduction, and defensible space (engine is in Douglas). | 8/2/2015 | US Forest Service, Coronado National Forest, Douglas Ranger District; Chiricahua NM |
| Intergovernmental agreement between Arizona State Parks and National Park Service | For exhibits at Kartchner Caverns aimed at resource protection and understanding. | 2004 (most current on file) | Arizona State Parks, National Park Service |
| **Special Park Uses** | | | |
| Electric powerline | Maintenance of electric powerline | 2021 | Sulphur Springs Valley Electric Coop |
| Telephone line | Maintenance of telephone line | Unknown | Valley Telephone |
| **Commercial Services** | | | |
| Special use permits and commercial use authorizations | In 2014, the park issued one special use permit for still photography and had six commercial use authorizations in place, including three for guided hiking, two for guided horseback riding, and one for bicycle touring. | Varies | Varies |

# Appendix D: Basics for Wilderness Stewardship

## Wilderness Background

*[Excerpted from "A Wild Place on the Frontier: Wilderness Building Blocks for Chiricahua National Monument" (2012)]*

Chiricahua National Monument is in southeast Arizona and contains 11,985 acres, of which 10,290 acres are designated as wilderness. Established by presidential proclamation in 1924, the park was originally created to preserve natural rock formations unique to the Chiricahua Mountains, known as "the Pinnacles," in perpetuity. These volcanically formed rhyolite columns, in addition to the cultural history and ecological context of the region, are indicative of Chiricahua's unique character.

In 1976, Congress designated a large portion of the park as part of the National Wilderness Preservation System. With an addition in 1984, a total of 10,290 acres is now designated as wilderness. A narrow paved corridor that includes Bonita Canyon Road, Massai Point, Echo Canyon, and Sugarloaf parking lots, developed areas (visitor center, employee housing, maintenance yard, and campground), and Faraway Ranch are not part of the wilderness designated area. The park is approximately 25 miles southeast of Willcox, Arizona, which has a population of approximately 3,800 people. Its wilderness designated area is surrounded on three sides by US Forest Service land and on one side by private land. Approximately 14.5 miles of wilderness boundary is currently fenced to prevent cattle grazing incursions. Coronado National Forest, which comprises most of the Chiricahua Mountains, contains a designated wilderness area approximately 6 miles south of the park.

Bonita Canyon Road, which was built by the Civilian Conservation Corps (CCC) in the 1930s, has a significant impact on the park's wilderness. Nearly all of the park's development and most of its visitor activity occurs along this road. Trailheads leading into the wilderness also start along this stretch of road or at the parking lots in the park. Other than short administrative roads and a dirt road leading to the King of Lead Mine, there are no other roads in the park.

The Chiricahua Mountains are an inactive volcanic range 20 miles wide and 40 miles long. It forms part of the Mexican Highland section of the Basin and Range Biogeographical Province and rises up dramatically from the valley floor to more than 9,000 feet, cresting in a series of uneven, craggy peaks, due to its violent volcanic history. Tucked deep into these steep, forested valleys and beneath the peaks are the remains of violent geological activity that continued for millions of years—the pinnacles, columns, spires, and balanced rocks of Chiricahua National Monument in the northern section of the Chiricahua Mountains. The Chiricahua Apaches referred to what is now the park as "Say Yahdasut" or "point of rocks" and thought of it as the dwelling place of the spirits of their ancestors.

In addition to the park's exceptional geological aspects, it is at a biological crossroads at the convergence of four distinct ecological regions (the Sonoran and Chihuahuan Deserts and the Rocky Mountain and Sierra Madre ranges). The convergence of these four biomes makes the area exceptionally rich in both floral and faunal biodiversity. Rocky Mountain representatives, such as the ponderosa pine and Engelmann spruce, coexist beside the soap tree yucca from the Chihuahuan Desert. Arizona sycamore and various types of oak dot the well-watered canyons. Apache pine also grows in the region, as it is the northernmost edge of the Sierra Madre range. Chihuahua pine is found, as are Douglas-fir and white fir; Arizona cypress; cane cholla; prickly pear; and several species of ferns, mushrooms, and fungi. There are five major drainages within the park, several with intermittent creeks that support a mixture of deciduous and evergreen woodlands. The heavily forested canyons provide habitat for numerous wildlife including coatimundi, white-tailed deer, javelina, and many species of birds. More than 300 bird species are found in the Chiricahua Mountains, some having migrated north from Mexico.

The Chiricahua Mountains are part of the Madrean Archipelago, a collection of 40 neighboring mountain groups between the Colorado Plateau and Sierra Madre Occidental. It is so named because it resembles an oceanic archipelago (a sea dotted with islands) only here the sea is desert grassland. These isolated mountain ranges are referred to as "Sky Islands." The Chiricahua Mountains are a perfect example of a Sky Island that formed during the basin and range faulting. Although resources of the Sky Islands are vital for wildlife, a diversity of human cultures have lived both symbiotically with and in opposition to their natural environment.

Historians and archeologists believe that indigenous peoples began to inhabit the region approximately 10,000 years ago. When Chiricahua was originally established as a park, the Chiricahua Apaches had already been removed from the landscape, forced onto reservations, and stripped of their way of life. In 1872, the area of what is now the national monument was part of the Chiricahua Indian Reservation. When it was established, the reservation was approximately 4,275 square miles in size and consisted of 2,000 acres of tillable land and 2,730,000 acres of grazing land. This reservation only existed for four years. In 1876, an executive order abolished the reservation because tribal members had been illegally raiding Mexican frontier villages. At that time, approximately 900 to 1,000 members of the Chiricahua Tribe lived on the reservation. In 1876, the Chiricahuas were sent to Florida, then to Alabama where they were held until 1894. After this, they were transferred to Oklahoma and were kept as prisoners of war until 1913. At that point, only about 100 tribal members remained. Some stayed in Oklahoma and others joined the Mescalero Apaches in south-central New Mexico.

Early pioneers in the late 1800s also attributed unique value to the region. Because of this, an early settler organized outfitting trips into the area before it was established as a national monument. Settlers in the region were instrumental in persuading Congress to protect this vital resource.

The Civilian Conservation Corps played a significant role in the development of the park. In addition to the main road, they constructed three residences and four maintenance buildings, a small exhibit structure on Massai Point, the original visitor center, and the campground caretaker's house and restroom outside what is now wilderness. In wilderness, they constructed most of the trails, a fire tower on Sugarloaf Mountain, and a no-longer-existing telephone line from Massai Point to Portal, Arizona. Additionally, they provided tours and conducted a topographic survey of the park.

Chiricahua is a land of stark contrasts. In less than one hour, a hiker can hike the Madrean evergreen forest among alligator junipers and Mexican pinyons into stands of Douglas-fir and vanilla-scented ponderosa pine as they reach the higher elevations. While in the wilderness, they may encounter a Sonoran mountain king snake elusively meandering among the detritus of the park's volcanic past, startle a mother black bear and her cubs nervously drinking from Bonita Creek, or simply stare into the shadows of the rhyolite columns and the folds of the Chiricahua Mountains from the peak of Sugarloaf Mountain. Chiricahua is an island of wildness overlooking a sea of domesticity—from the higher elevations, one can see the transition from the highly rationalized landscapes composed of rangeland and small farms to the city of Willcox, with its roads creating unnatural fragmentations in the once wild landscape.

As the park became another fortress of conservation in the United States' public land project and became administratively "wild," it further perpetuated the duality between natural and human by asserting that wilderness and naturalness only exist in places where humans do not. Its story, like all other designated wilderness areas, is one of paradox. The paradoxes embedded in the landscape reveal a history riddled with struggle, contradiction, immense aesthetic beauty, and great social and natural complexities.

## Wilderness Character Narrative

**Natural Quality of Wilderness Character**

Due to the diverse landscape and unique geographic position between the Sierra Madre Mountains in Mexico and the Rocky Mountains in the United States, the Chiricahua National Monument Wilderness is home to an abundance of ecological diversity.

The Chiricahua National Monument Wilderness is representative of the "Sky Island" ecosystem. The 70,000-square-mile Sky Island region of southeastern Arizona, southwestern New Mexico, and northwestern Mexico contains 40 mountain ranges that are connected by wildlife corridors. Each Sky Island has a distinct ecosystem and the region is globally unique because of its rich diversity of species and habitats.

Before the climate in the southwest began to change approximately 15,000 years ago, forests stretched from the Rocky Mountains down to the Mexican Sierra Madres. Wolves, black bears, and jaguars moved freely along this wooded corridor. But, with the end of the ice age, temperatures rose and precipitation dropped and the desert to the south spread north. Species that required more temperate climates found themselves marooned at high elevations atop arid gulfs of desert. The result was mountaintop Sky Islands amid a 20-million-acre sea of desert.

Weldon Heald, the famous nature writer and resident of southeastern Arizona, coined the term "Sky Islands" in 1967 to denote mountain ranges that are isolated from each other by intervening valleys of grassland or desert. The valleys of this basin and range country act as barriers to the movement of certain woodland and forest species, somewhat the way saltwater seas isolate plants and animals on oceanic islands. Other species, such as mountain lions and black bears, depend on corridors between mountain islands to maintain genetic diversity and population size. Considering this, ranching, fencing, and development have all fragmented this uniquely North American ecosystem. Nevertheless, the Chiricahua National Monument Wilderness is an island of great species abundance and diversity.

Wildlife types in the Chiricahua National Monument Wilderness are diverse, reflecting the park's unique geographical location. In addition to being between the Sierra Madres and Rocky Mountains, Chiricahua lies at the interface of the Sonoran and Chihuahuan Deserts. The five major drainages within the park add riparian components to the park's faunal diversity. Overall, the park supports a unique and diverse assemblage of mammals, birds, reptiles, and amphibians. The challenge in maintaining this biodiversity is underscored by the fact that since the turn of the last century, desert bighorn sheep, Mexican gray wolves, and grizzly bears have all been extirpated from the Chiricahua Mountains.

Changes, such as increased development surrounding the park and in Willcox, as well as global climate change, pose challenges to land managers at Chiricahua National Monument. Urban development has intruded on crucial wildlife corridors for species such as the black bear outside the Chiricahua Mountains. Climate change, on the other hand, poses an existential threat to all Sky Islands in the region. Trends in precipitation suggest a future decrease in rainfall in the region. If these trends continue, they will have major impacts on vegetation in the Sky Island region. In the absence of increasing rainfall, rising temperatures increase the aridity of a habitat by increasing evapotranspiration. In response, biological communities will shift upslope for more suitable conditions. Considering this, the highest elevation plant communities may be outcompeted as time passes and may become extirpated from the park.

The United States-Mexico international border poses a threat to the natural quality of wilderness character at the park as well. Undocumented migrants, drug smugglers, law enforcement efforts, and related activities can all degrade the park's natural resources. Threats to this resource include increased fire risk, wildlife disturbance, habitat destruction or modification, spread of invasive species, trash and human waste, and the creation of unplanned linear routes by migrants and/or law enforcement personnel.

Although there are numerous nonnative species established in the park, the great majority do not appear to be invasive at this time. The few that are invasive, however, are already so widespread and well established that control is probably unfeasible. Most of these species seem to have attained their maximum invasive potential and may not increase further, at least not into undisturbed habitats. Species of interest to be considered for future management outlined in the park's general management plan in Chiricahua are Maltese starthistle, Russian olive, watercress, salt cedar, and bigleaf periwinkle. These species may threaten plant and animal communities in Chiricahua National Monument in the future.

Additionally, although no mining claims exist in the wilderness and no part of the area is available for mineral-claim location, the area adjoining the east and north sides are "mineralized." This area, known as King of Lead Mine, has been partially mined and may contain reserves and resources of several metals. In the 1970s, the Bureau of Mines stated that silver, copper, lead, zinc, and manganese have been produced from the district and that tungsten is also known to be deposited. If mining were to resume, leached chemicals from mining operations could negatively impact physical resources, such as water quality, in the wilderness. Unfortunately, Chiricahua managers have no control over the actions of mining operations. However, threats such as these must be taken into consideration in the future management of the park's unique wilderness.

Considering the inevitability of climate change, invasive species infestation, and the unforeseen political and economic contexts both nationally and in Mexico, park managers must be able to manage for change. The need for flexibility in management due to the rapidly changing contexts national parks are situated in, was outlined most recently in Revisiting Leopold: Resource Stewardship in the National Parks (2012). This fact, however, makes it difficult to manage wilderness as recent research suggests that managing for "naturalness" is more important than "wildness" among wilderness users. Given this, the concept of naturalness may have to be reconsidered in the context of a rapidly changing world and the growing understanding of the role "change" plays in ecological systems.

**Untrammeled Quality of Wilderness Character**

Freedom is a fundamental quality of wilderness. This was eloquently captured by Howard Zahniser, the main author of the Wilderness Act, in the selection of the relatively obscure word "untrammeled" to define wilderness. A "trammel" is a net used for catching fish, or a device used to keep horses from walking. To trammel something is to catch, shackle, or restrain it. Untrammeled means something is free or unrestrained. Given this, wilderness areas are to be unconstrained by humans. Zahniser defined "untrammeled" in the Wilderness Act as "not being subject to human controls and manipulations that hamper the free play of natural forces."

Often cited by managers as a handicap for effective management of the wilderness, the untrammeled quality is controversial and often misunderstood due to the word's obscurity. In the context of wilderness, it is meant to facilitate restraint among wilderness managers. Although not articulated within the Wilderness Act, managerial restraint protects landscapes and ecological processes against unforeseen consequences of human action in highly complex social-ecological systems such as wilderness designated areas.

Actions authorized by the park that intentionally manipulate the biophysical environment, such as the treatment of invasive plant species, threaten the untrammeled quality of wilderness character. Although the intention behind the treatment of invasives is to improve the naturalness of the park's ecosystem, it nevertheless constitutes trammeling because it is an intentional manipulation of the biophysical environment. Managerial dilemmas such as these are indicative of the complexities of managing for wilderness character. A management action, such as the treatment of invasive species, can improve one quality of wilderness character and degrade another. Given this, it is important for managers to consider the impacts of all operations and actions on the park's wilderness character.

Additionally, the fire history of the park has been affected significantly by historical trammeling. Fire suppression, in particular, historically increased fuel loads and led to a significant divergence from the natural fire return interval. The build-up of fuel loads was a significant factor that led to the catastrophic fire that occurred in the summer of 2011. During the late summer, high-intensity fires burned 85% of the park, leaving only small patches of mixed-conifer and pine stands. This extreme event led to a significantly altered vegetation regime as post-fire regime vegetation is composed mostly of oak shrub.

Increased complexity due to the global movement of people, plants, and the dramatic increase in human population since the late 1950s and early 60s has challenged wilderness managers to maintain an untrammeled approach in managing wilderness. In the case of the Chiricahua National Monument Wilderness, the movement of people poses a high risk to the untrammeled quality of wilderness character. Undocumented migrants and drug smugglers currently alter or cut the park's boundary fencing in order to facilitate easier movement. As a result, the likelihood of cattle grazing incursions rises. As an unauthorized action that manipulates the biophysical environment, cattle grazing, in addition to altering the vegetation through grazing, leads to the spread of invasive species as seeds are deposited into the soil through cow manure. Additionally, border crossers use the springs and creeks in the park. This leads to greater erosion surrounding the water source and degrades the water quality of these important aquatic resources.

Usurping the human tendency to alter the natural environment is a challenging and noble goal. Considering wilderness areas are profoundly cultural constructions, the recognition that we should show restraint is highly profound. While Howard Zahniser was articulating the American wilderness ethic in the Wilderness Act, great scientific advancements in the field of ecology were being achieved by Aldo Leopold. Considering humans have profoundly altered virtually all the environments they have lived in or moved through and the Leopoldian recognition that all biotic life is connected and dependent on one another, Zahniser developed an ideal to strive toward in the Wilderness Act: through the recognition of the human tendency to trammel, we can overcome our subconscious urge to alter our biophysical environments and begin to respect the autonomy of ecological processes of the natural world in their own right. This highly democratic notion that wilderness has a right to be free from the influence of humans, despite its dependence on a government's legal redefinition of the landscape, is truly revolutionary in western culture.

**Undeveloped Quality of Wilderness Character**

The jarring contrast between the highly fragmented grasslands surrounding Chiricahua National Monument and the lichen-covered rhyolite columns dotted throughout a wild landscape exemplify the undeveloped quality of wilderness character at the park. In the context of Chiricahua, development in the wilderness is mainly for administrative, conservation, and scientific purposes. While a small amount of structures do exist in wilderness, the vast majority of the landscape has retained its primeval character and influence.

Although the wilderness is mostly free from modern human development, there are a few nonrecreational structures, installations, and developments. There is a significant amount of fencing on the park and wilderness boundaries. Fencing serves to prevent cattle from grazing inside the park. Although the prevention of cattle grazing is important, the use of fencing prevents the movement of other animals and exists as a modern human development on the landscape. In fact, it has been argued that the construction of barbed-wire fencing has altered the western landscape more than any other modern human development. It exists, not only as a barrier for movement, but as a representation of the manner in which contemporary peoples perceive their environment—as something that can be commodified, fragmented, contained, and rationalized.

The use of built structures for research is also an important element in Chiricahua National Monument. Although the presence of research structures, such as wildlife cameras, is an integral part of understanding the faunal composition and the frequency of use by undocumented migrants and drug smugglers, it nevertheless degrades the undeveloped quality of wilderness character. This issue, however, may become somewhat mitigated as technology progresses and research devices get smaller and less obtrusive.

There are very few administrative structures in the Chiricahua National Monument Wilderness. One such structure is the Sugarloaf Mountain fire lookout. This structure, built by the Civilian Conservation Corps in 1935, is listed in the National Historic Lookout Register and, up until today, has been used for administrative and fire-related purposes. As of fiscal year 2012, it is not being used as a fire lookout, but, resource management plans to use it in 2013 and beyond. Situated on the top of Sugarloaf Mountain, the fire lookout is visible from many trails in the park. It is a constant reminder to visitors of modern human development and is a human-made fixture on the landscape. It does, however, serve to remind wilderness users of the great history of the Civilian Conservation Corps in Chiricahua National Monument and of the immense infrastructural improvements they brought to the American landscape in the early 20th century.

Lastly, the King of Lead Mine in the northeastern corner of the wilderness degrades and threatens the undeveloped quality of wilderness character. Approximately 2.5 acres of the mine is in the wilderness and a dirt road stemming from Bonita Canyon Road currently bisects the wilderness. The mine has gone through different levels and frequencies of use over the previous decades. In the future, mining may resume at greater intensities, depending on technical advances in mining, shifts in the monetary values of available minerals, and other factors. This mine, although currently small, is a permanent fixture on the landscape and is a modern human development that severely impacts the wilderness character of the park.

Except in rare emergency situations, the park highly limits its use of motorized vehicles, motorized equipment, or mechanical transport in wilderness. With a focus on primitive tools and traditional skill sets, the park responsibly maintains its trail system and other CCC structures in wilderness. Actions such as these serve to preserve the undeveloped quality of wilderness character.

Overall, the majority of the wilderness remains primarily free from permanent improvements. This unspoiled condition must be preserved in order to maintain the undeveloped quality of wilderness character at Chiricahua. In order to do this, managers must continue to consider the minimal tools required to meet the wilderness stewardship goals of the park.

**Solitude or a Primitive and Unconfined Type of Recreation Quality of Wilderness Character**

There is a diversity of experiences available to visitors to the Chiricahua National Monument Wilderness. Visitors may experience solitude, self-discovery, revitalization, freedom from the constraints of society or personal challenge, and self-reliance within the wilderness. The wilderness context gives visitors a time to reflect on and understand the interconnectedness and interrelatedness of the socio-natural world and their individual relationship with it. With this understanding comes a deep appreciation of the natural world, public lands, and wilderness.

The solitude or a primitive and unconfined type of recreation quality of wilderness character faces serious threats in the form of modern development outside of wilderness. As backpackers ascend into higher elevations of the park, they are faced with two distinct disturbances to their opportunity to experience solitude: low flying flights degrading the natural soundscape and the surrounding communities and ranchlands degrading the viewshed. Depending on the subjective experience of the wilderness user, seeing developments from the high country may elicit feelings of separation from the modern world and appreciation of the space that temporarily separates them from civilization. Others, however, may feel that sights of modern development encroaches on their viewshed and degrades their wilderness experience.

Nevertheless, the sights and sounds of modernity in wilderness are a constant reminder of the civilization outside Chiricahua's undeveloped landscape.

The quality of Chiricahua's night skies is a remarkable feature of the park. On most nights, wilderness users can gaze into the Milky Way, spot shooting stars, and see the planets of our solar system. Activities such as this lead to self-reflection and, for some, self-discovery. Rather than sitting in a structure with artificial light, noise, and entertainment emanating from the plethora of our modern devices, wilderness users are given the opportunity to participate in an age-old activity that links us to our human ancestors. Light pollution from surrounding communities and park buildings outside wilderness threaten this resource. The park, however, has done an excellent job reducing light pollution by installing low-emitting light fixtures outside living quarters and administrative buildings.

The roadway infrastructure inside and outside the park also threatens wilderness users' opportunity to experience solitude. The sights and sounds of motorized vehicles and bicycles outside the wilderness remind users of the manifestations of modernity, something many are attempting to temporarily escape. The design of the trail system, however, generally elicits feelings of solitude as it brings wilderness users into the lowland canyons of the park, temporarily isolating them from the sights and sounds of the roadway.

Inside wilderness, trails pose a complication to park managers who want to manage for both solitude and a primitive and unconfined type of recreation. The trails at Chiricahua are conduits for travel away from Bonita Canyon Road. They take wilderness users through the volcanic columns and pinnacles of rhyolite and into the lower elevation canyons of the park, temporarily separating them from the sights and sounds of modern human development. Although they promote opportunities to experience solitude from this perspective, they also exist as highly maintained trails that concentrate and control the movement of wilderness users. Facilities such as these drastically degrade opportunities for wilderness users to have a primitive and unconfined experience. Additionally, concentrated use facilitates a greater number of trail encounters, thus degrading opportunities to experience solitude. Given this, Chiricahua's trail system has a complex relationship to wilderness ideals.

Dispersed camping is currently restricted inside the Chiricahua National Monument Wilderness. Although there is one campground in the park, it is outside the wilderness area and adjacent to Bonita Canyon Road. Although this protects other qualities of wilderness character, wilderness users are prohibited from having an overnight primitive experience in the wilderness. Additionally, the lack of campgrounds or dispersed camping in the wilderness degrades opportunities to experience solitude because the only campground at the park is immediately adjacent to a road and has 26 campsites and a group site.

Lastly, border impacts have the potential to significantly degrade opportunities to experience solitude. From the trash and fire rings left by undocumented migrants and drug smugglers to the growing presence of US Border Patrol, there is an array of threats that stem from border-related issues. As time passes and the political and economic contexts of the United States, Mexico, and the world evolve, border issues may worsen, improve, or remain the same. Although managers have no influence over such macro-level issues, they have the ability to respond at the park level. As park operations evolve due to changing contexts, managers must take the unique aspects of wilderness character into consideration in order to maintain Chiricahua's unique wilderness.

Managers at Chiricahua have the opportunity to take responsible action to facilitate opportunities for solitude or primitive and unconfined recreation. In order to ensure responsible management of its wilderness lands, managers must understand the implications of altering restrictions of visitor use on the other four wilderness qualities. As they have done in the past, they will continue to analyze the impacts of their management actions and attempt to facilitate opportunities for solitude and a primitive and unconfined type of recreation for wilderness users.

**Other Features of Quality Wilderness Character**

The fifth quality is unique to the park and is based on the special features in Chiricahua National Monument and its environs. For Chiricahua, the other features generally refer to human history in the park and to the historical human-environmental relationship in what is now wilderness.

Born from an immense volcanic eruption, the balanced rocks and pinnacles of Chiricahua National Monument have witnessed the passage of prehistoric peoples, Spaniards, Chiricahua Apaches, soldiers, settlers, CCC enrollees, and contemporary visitors. Given this, the Chiricahua National Monument Wilderness has an extensive human history embedded into its landscape.

Archeologists believe that the first humans arrived in the Chiricahua Mountains about 10,000 years ago when the climate was more temperate. These Paleo-Indians lived a nomadic lifestyle, hunting ice-age mammals and gathering pinyon nuts, wild onions, acorns, and many other fruits and nuts. As the climate warmed, the Paleo-Indians evolved into the widespread desert culture of the Great Basin and Southwest. With the establishment of a more sedentary and agricultural-based society, the Mogollan culture emerged around 200 or 300 BCE. Corn, beans, and squash were important staples for these people. By 1100 or 1200 CE, the Mogollan culture was merging with other southwestern cultures, particularly the Ancestral Puebloans to the north. By 1300 or 1400 CE, however, it is speculated that some combination of drought, warfare, or depletion of natural resources spurred the mass exodus of people in the region.

By the late 1500s, the Chiricahua Apaches had migrated from the north and were living in the rugged mountain ranges of southeastern Arizona. They were hunter-gatherers who migrated seasonally from one area to the next. Perhaps due to pressures related to European colonization, the Apaches had a warrior-based culture, raiding enemy Indian camps for captives and other goods. When the Spanish arrived in the Southwest, their horses and weapons became targets of Apache raids. Conflicts increased with future settlers until 1876, when the Apaches were forcefully rounded up and sent to the East Coast. Soon after, Chiricahua became a national park, the Civilian Conservation Corps developed many infrastructural projects that provided jobs for young men and money for their families during the Great Depression of the 1930s. Ed Riggs, a descendant of early settlers, designed all the hiking trails and led the CCC construction teams of Company 828, NM 2-A. The CCC men improved Bonita Canyon Road and built the campground, fire lookout, staff housing, the visitor center, and nearly all the trails in wilderness.

The trail system at Chiricahua is another defining feature of the park. Meticulously built by the Civilian Conservation Corps in the 1930s and maintained with traditional methods and tools today, the trail system brings park visitors into the wilderness. The trail's remarkable stonework, intelligently designed routes, and overall character are emblematic of the thought that went into the trail system when it was constructed. The current maintenance crew at the park is dedicated to the use of primitive tools and methods to not only maintain the integrity of the trails, but to preserve traditional skillsets related to park maintenance. The continuation of these traditional methods is integral to the park's wilderness character.

A major critique of the wilderness ideal is that it attempts to erase the human history in natural environments and create fictional narratives of pristine Edenic landscapes that never truly existed. From an honest wilderness perspective, it is important to consider and appreciate the profound human history in the wilderness. By doing so, we promote a more accurate historical narrative of people's relationship with the landscape and can display the myriad alternative ways of living historically and today. It conveys the deep importance of culture in the way people perceive and therefore treat the natural world. Signs of this historical landscape are still seen today in the form of archeological and CCC sites. It is imperative that these cultural resources be preserved and protected in wilderness in order to promote a more nuanced and representative understanding of the historical human-environmental relationship in what is now Chiricahua National Monument.

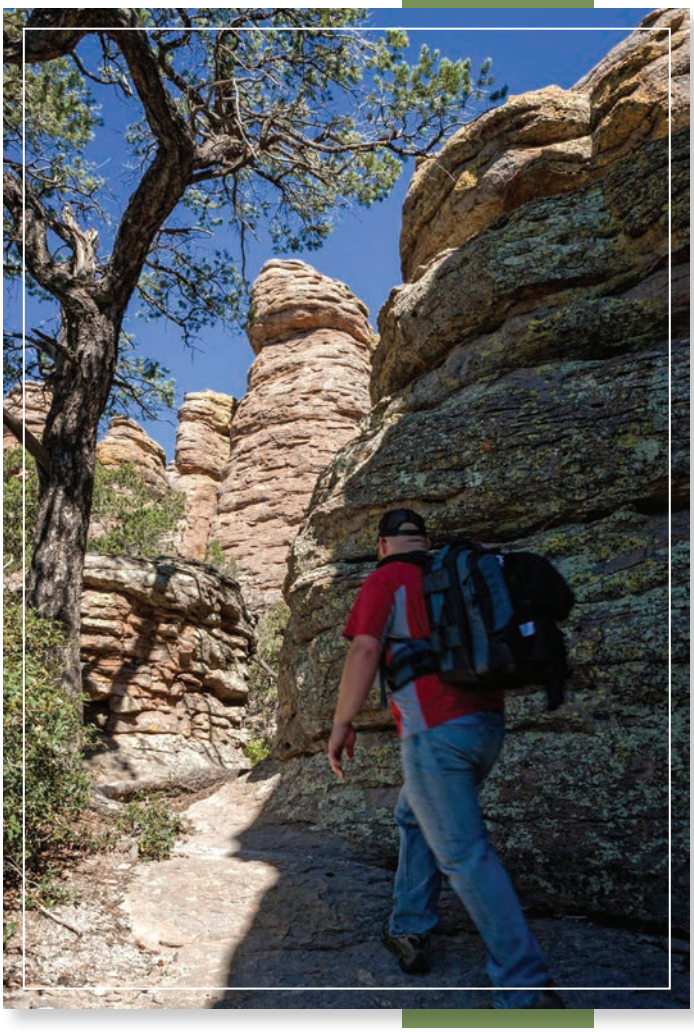
There are, however, threats to this resource. Vandalism, theft, and the simple passage of time have degraded it. While managers should do all that is possible to preserve the material culture of these peoples, it is important to integrate their histories into the narrative of the park and the wilderness. Chiricahua, as of now, does an excellent job at promoting this human history in the context of the park and should continue to highlight it. The preservation of this resource not only promotes a more accurate understanding of the environmental history of the landscape, it shows that modernity is not the only way of life that existed, or exists today.

## Issues for Wilderness Planning

Like the wilderness idea itself, wilderness designation at Chiricahua National Monument can complicate its management. If understood, these complexities can be used to complement the wilderness user's experience and to improve the park's overall wilderness character. The following issues related to the Chiricahua National Monument Wilderness are provided by the Wilderness Fellow and are based on his experience and conversations with park staff. They represent identified issues and opportunities that, if addressed by park management, can positively impact the character of the Chiricahua National Monument Wilderness.

### Recognition of the Complexity of Wilderness Character

This framework has provided a suite of measures to consider in future wilderness management at Chiricahua National Monument. Although it may be tempting for park managers to slightly alter operations to improve particular measurements, the goal of this framework is to convey the state and trends in wilderness character in the park's wilderness. Although fundamentally reductionistic, this suite of measures tells a story of interconnectedness and interrelatedness among the five wilderness qualities. A manager cannot simply focus on improving one quality, indicator, or measurement without considering its implications on others. For example, the treatment of invasive species has potentially long-term, major beneficial impacts on the natural quality of wilderness character while having short-term, major adverse impacts on the untrammeled quality of wilderness character. Additionally, the treatment or nontreatment of invasives, depending on the method employed, can significantly impact the three other wilderness character qualities. This framework provides a nuanced method to understand the fundamentals of wilderness character at Chiricahua. Thus, it can be used to both improve the park's wilderness character and to facilitate a meaningful dialogue within the park staff and with the public regarding the vexing complexities of managing wilderness on public lands.



### Use of Consistent Language When Talking About Wilderness

By describing wilderness character in the context of its five qualities, a template for understanding develops. Through deliberate and consistent use of this language, wilderness stewardship becomes easier to talk about and understand. Increased public understanding lends itself to more effective management through the creation of a public with greater understanding of and engagement with the wilderness. Park staff has the opportunity to develop this shared understanding among themselves, the public, and other agencies or departments with whom they collaborate.

**Engaging the Community with Wilderness**

The majority of the public does not understand the underlying meaning of the mosaic of bureaucratic designations on the landscape and, specifically, the implications of what it means for land to be designated as wilderness. Chiricahua National Monument is incredibly effective at promoting not only the park itself, but, the awesome natural phenomena that exists due to the legal definition of the landscape. With that said, however, a greater emphasis on wilderness in environmental education and community outreach could have vast implications. Specifically, educating the public about the use of artificial lights could lower light pollution surrounding the park. Additionally, this report has outlined specific language to use in describing wilderness character in the context of analysis. This language can also be used to make wilderness more understandable for the public.

**Undocumented Migrants and Drug Smuggling**

The increased efforts of the Department of Homeland Security to secure the nation's borders have pushed undocumented migrants and drug smugglers to more peripheral landscapes. In other words, the building of physical or technologically securitized walls has simply pushed migrants farther eastward and into more inhospitable environments. The Chiricahua National Monument Wilderness has seen a dramatic increase in "border activity" in the past few years. Regardless of the reasons for this dramatic increase in border activity, park managers acknowledge it exists as an additional element when considering wilderness management operations. Navigating between the nation's desire to secure the border and the NPS mandate to protect public lands is a challenging endeavor.

While border security often takes precedence over protecting public lands, the two are not mutually exclusive of one another. Often the best protection for federal lands is increased security, enforcement, and interagency communication. It is imperative that park management engage in meaningful, regular dialogue with the Department of Homeland Security so that agency work can support combined mission success and minimize negative impact either agency.

Both agencies believe the space must be controlled; the National Park Service views the landscape as a space for public use and the protection of the cultural and natural environments. The Department of Homeland Security, views the landscape as space important to protecting the American public. Neither of these viewpoints is right or wrong, they are simply different perceptions of space meditated by departmental mandates and culture. Resolution to management conflicts that arise will come from conversations among the staff of the Department of Homeland Security, the National Park Service, and, when appropriate, the public.

**Lack of Backcountry Camping**

The Chiricahua National Monument Wilderness does not allow dispersed backcountry camping and does not have any designated campsites in wilderness. Because of this, wilderness users are not given the opportunity to have an overnight experience inside the wilderness designated area. There are several methods to alleviate this identified issue. A simple way to remedy this problem is to create a new trail that connects park land to adjacent US Forest Service land, which both allows dispersed camping and has designated campsites. There is an opportunity to both work in conjunction with Coronado National Forest and allow wilderness users in the park to have a true backcountry experience without having to reenter their automobile and drive to US Forest Service land. Although this would constitute the construction of a facility that decreases self-reliant recreation, it would allow wilderness users to have a primitive experience in the Chiricahua backcountry.

Additionally, the park could allow a trial period of very limited dispersed camping in selected areas of the wilderness. A study could be conducted to determine its impact to the natural environment and wilderness users' perception of the wilderness. After this study is complete, the park could reevaluate and determine if dispersed camping is appropriate in the wilderness.

**Protecting the Night Skies**

The Chiricahua National Monument Wilderness is home to some of the most remarkable night skies in the continental United States. Considering that "natural night" is a drastically disappearing resource, park managers at Chiricahua have the opportunity to protect this vital resource in southeastern Arizona. Actions, such as installing low light-emitting light fixtures outside park buildings, are needed to improve the nighttime environment at Chiricahua. If, in the future, staff recommends adding new or brighter light to park buildings, a careful evaluation must take place to determine the effects on the night skies. Additionally, working closely with organizations, such as the International Dark-Sky Association, could provide guidance on how to responsibility protect Chiricahua's night skies and help educate park users of its uniqueness in a time of modernization.

**Making a Commitment to Collecting Missing Measures**

As of 2012, there are five measures in this report that the park does not currently collect data for. In order to understand trends in the park's unique wilderness character, it is essential that data are collected for these measures in the future. The following are the five measures with missing data:

1. border-related unplanned linear routes
2. total number of days users in wilderness
3. number of trail encounters in wilderness
4. soundscape
5. night sky

As mentioned in chapter one, this monitoring strategy should be understood as an evolving process. As technology and advancements in knowledge allow researchers to more accurately understand our socio-natural world, new or altered research methodologies should be integrated into the wilderness character assessment in order to keep the monitoring strategy useful and relevant to wilderness managers.

**Preservation of Cultural Resources in Wilderness**

Cultural resources, such as the CCC trails and Sugarloaf Mountain fire lookout, should be continued to be protected and maintained. Maintenance should, however, always be consistent with the Wilderness Act and wilderness values. As a unique component to the Chiricahua National Monument Wilderness, cultural resources are integral to the park's wilderness character. By using motor vehicles, motorized equipment, and/or mechanical transport in maintaining these resources, this diminishes our unique relationship to the landscape and impacts the primitive skill set that sets Chiricahua National Monument apart from other wilderness designated areas. When possible, current maintenance in the park's wilderness is dedicated to preserving these skill sets. It is vitally important to maintain a dedication to the use of primitive tools and skills in wilderness in order to preserve its wilderness character.

# Appendix E: Traditionally Associated Tribes

**Apache Tribe of Oklahoma**
Apache Business Committee
PO Box 1330
Anadarko, OK 73005

**Fort Sill Apache Tribe of Oklahoma**
Fort Sill Apache Business Committee
43187 US Hwy 281
Apache, OK 73006

**Hopi Tribe of Arizona**
Hopi Tribal Council
PO Box 123
Kykotsmovi, AZ 86039

**Jicarilla Apache Nation, New Mexico**
Jicarilla Apache Tribal Council
PO Box 507
Dulce, NM 87528

**Mescalero Apache Tribe of the Mescalero Reservation, New Mexico**
Mescalero Apache Tribal Council
PO Box 227
Mescalero, NM 88340

**Pascua Yaqui Tribe of Arizona**
Pascua Yaqui Tribal Council
7474 S. Camino De Oeste
Tucson, AZ 85746

**San Carlos Apache Tribe of the San Carlos Reservation, Arizona**
San Carlos Apache Tribal Council
PO Box 0
San Carlos, AZ 85550

**Tohono O'Odham Nation of Arizona**
Tohono O'Odham Tribal Council
PO Box 837
Sells, AZ 85634

**Tonto Apache Tribe of Arizona**
Tonto Apache Tribal Council
Tonto Reservation No. 30
Payson, AZ 85541

**White Mountain Apache Tribe of the Fort Apache Reservation, Arizona**
White Mountain Apache Tribal Council
PO Box 700
Whiteriver, AZ 85941

**Zuni Tribe of the Zuni Reservation, New Mexico**
Pueblo of Zuni Tribal Council
PO Box 339
Zuni, NM 87327

# Intermountain Region Foundation Document Recommendation
# Chiricahua National Monument

**January 2016**

**This Foundation Document has been prepared as a collaborative effort between park and regional staff and is recommended for approval by the Intermountain Regional Director.**

Allen S Etheridge — January 11, 2016

**RECOMMENDED**
**Allen Etheridge, Superintendent, Chiricahua National Monument** — **Date**

Sue E. Masica — 1/22/16

**APPROVED**
**Sue E. Masica, Regional Director, Intermountain Region** — **Date**

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historic places; and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

CHIR 145/129854
January 2016

# Foundation Document • Chiricahua National Monument

NATIONAL PARK SERVICE • U.S. DEPARTMENT OF THE INTERIOR