



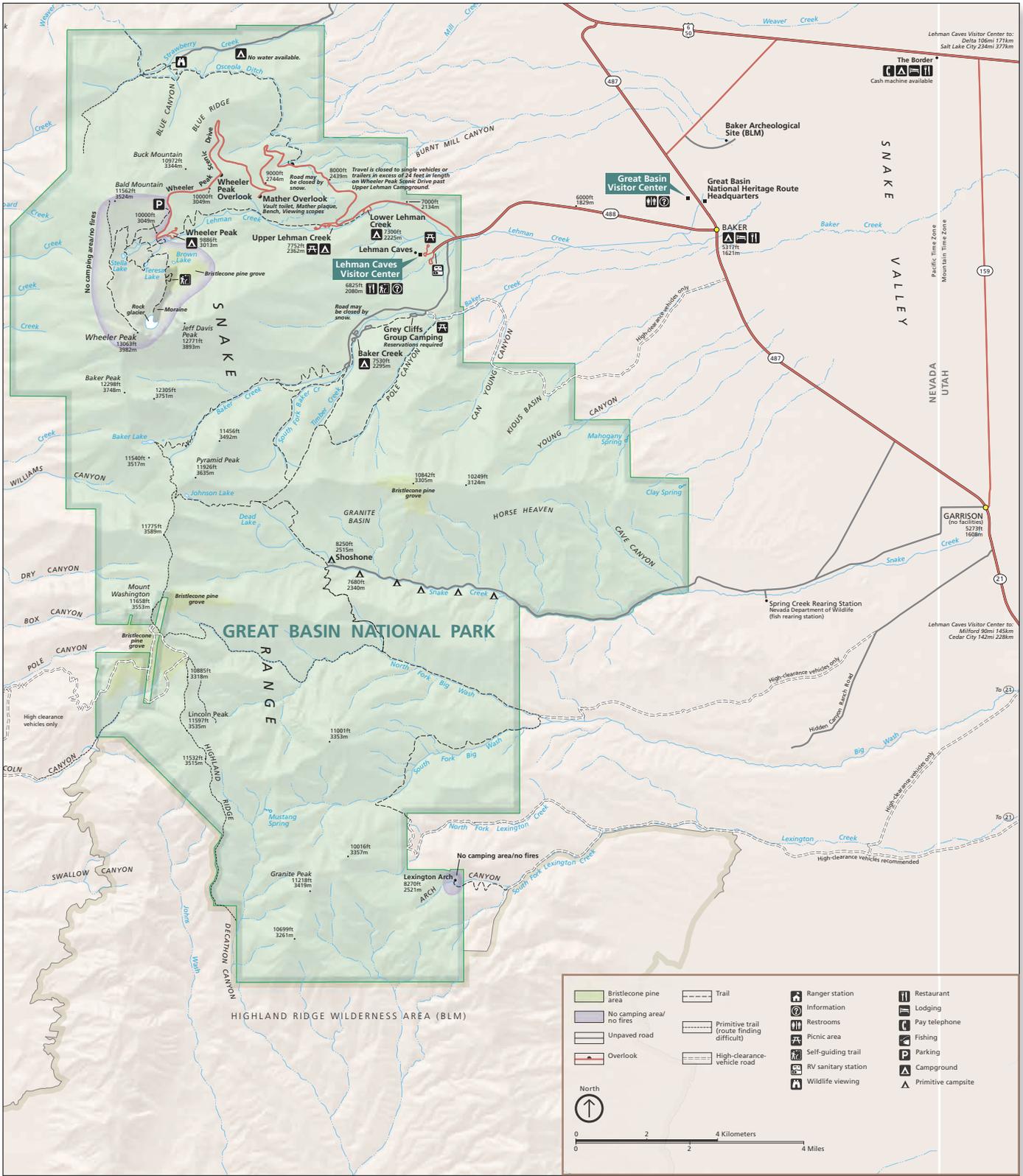
# Foundation Document

## Great Basin National Park

Nevada

August 2015





|                          |                                           |                     |                    |
|--------------------------|-------------------------------------------|---------------------|--------------------|
| Bristlecone pine area    | Trail                                     | Ranger station      | Restaurant         |
| No camping area/no fires | Primitive trail (route finding difficult) | Information         | Lodging            |
| Unpaved road             | High-clearance-vehicle road               | Restrooms           | Pay telephone      |
| Overlook                 |                                           | Picnic area         | Fishing            |
|                          |                                           | Self-guiding trail  | Parking            |
|                          |                                           | RV sanitary station | Campground         |
|                          |                                           | Wildlife viewing    | Primitive campsite |

North

0 2 4 Kilometers  
0 2 4 Miles

Lehman Caves Visitor Center to:  
Doria 180mi 171km  
Salt Lake City 234mi 377km

Lehman Caves Visitor Center to:  
Milford 90mi 145km  
Cedar City 142mi 229km

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## 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 both as a paper map and as geospatial data for use in a web mapping environment. The park atlas for Great Basin National Park can be accessed online at: <http://insideparkatlas.nps.gov/>. (Please note that this park atlas is still under development.)



## 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

Great Basin National Park lies along the eastern border of Nevada within a large geographic region known as the Great Basin. The Great Basin is an area defined by water, though water itself is scarce. Consisting of a seemingly endless expanse of mountains and desert valleys, the Great Basin is aptly named because it is the only region of North America where water has no outlet to the sea. The Great Basin is also the largest desert in the United States. Great Basin National Park preserves an outstanding segment of this broader, diverse landscape.

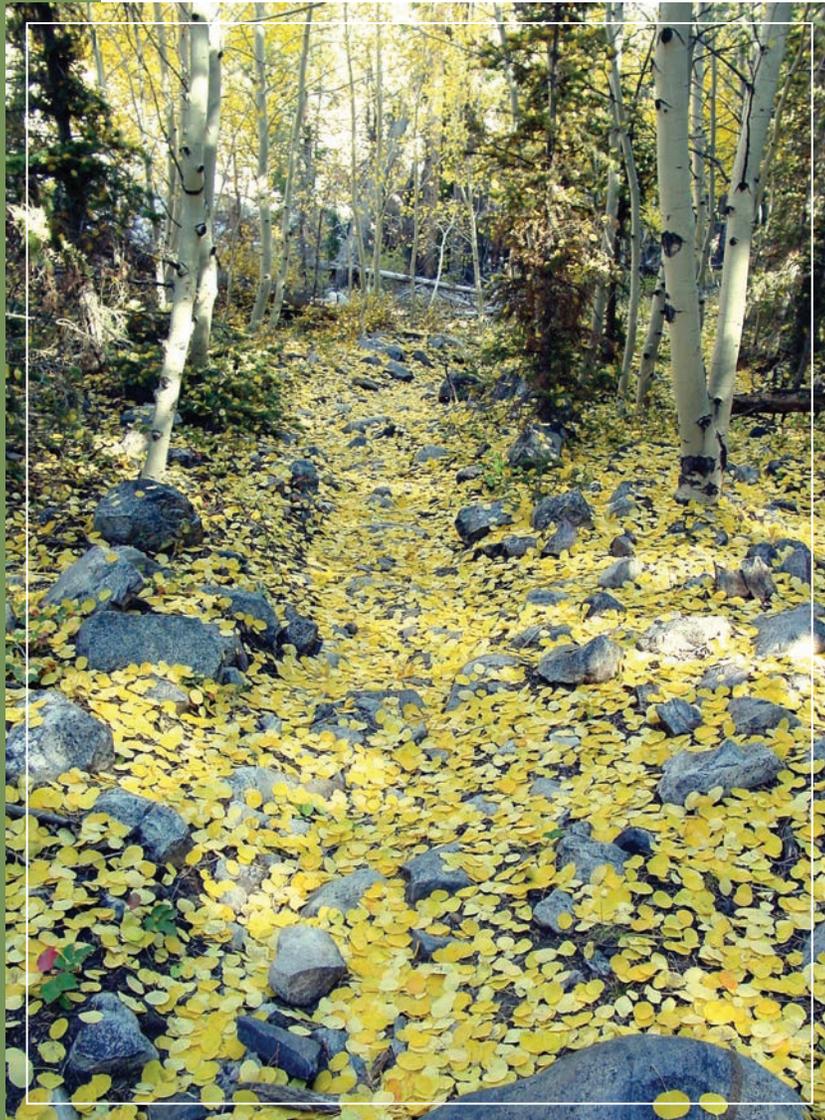
Rising from the sagebrush flats on the desert floor, through extensive conifer forests at the park's middle elevations, and all the way to the alpine peaks of the Snake Range, the park exemplifies ecological diversity. Given its island-like setting amidst the desert landscape, the park is home to many uniquely evolved plants and animals, including ancient groves of bristlecone pines, the oldest living trees on earth. Crowned by Wheeler Peak, at 13,063 feet in elevation, Great Basin National Park also showcases an exceptional combination of geologic features and processes, such as Basin and Range topography, numerous glacial features, and a large collection of caves, including the celebrated Lehman Caves. Collectively, the park's diversity, remoteness, and challenging environmental conditions highlight the importance of adaptation—for plants and animals as well as for people.

The park's geology and hydrology provide the "canvas" for the many living communities that inhabit the park. This canvas consists of mountains, rock formations, caves, lakes, streams, and springs. The landscape in and around the park is a good example of what is found throughout the Basin and Range geologic province, an area characterized by long mountain ranges separated by equally long, flat valleys. During the ice ages, alpine glaciers, or cirque glaciers, were present in several locations along the Snake Range peaks. Great Basin National Park is home to the only remnant glacier in Nevada and one of the southernmost glaciers in the United States. Great Basin National Park encompasses most of the South Snake Range, one of the many ranges in this geologic province. Past and ongoing uplifting contributes to an ever-changing landscape. Geologic faults in the park and region are still active, with the mountains continuing to push upwards and basins continuing to widen.



This mountainous terrain plays a role in generating spring and summer rains and winter snows. This precipitation sustains six subalpine lakes—each relatively small and shallow. Ten permanent streams originate within the park and are fed by numerous springs along their courses. Great Basin National Park contains more than 40 known caves, and probably contains many other undiscovered caves. These cave systems are home to unusual, endemic cave life such as the Lehman Caves pseudoscorpion and distinctive cave formations such as folia, bulbous stalactites, anthodites, and shields.

The park supports remarkable biological diversity. The Great Basin Desert is the largest of the four US deserts and the only “cold” desert in the country, where most precipitation falls in the form of snow. The isolated nature of the Snake Range ecology amidst this broader desert is an example of “island biogeography,” where the surrounding desert valleys have isolated plants and animal species, forcing them to adapt and evolve. Great Basin National Park ranges in elevation from approximately 5,300 feet to 13,063 feet. This vertical gradient—nearly 8,000 feet—allows for a rich diversity of plant and animal communities, from those that adapted to the desert flats to those adapted to forest or alpine environments, including the iconic bristlecone pine. Despite the overall dry conditions, Great Basin National Park and the neighboring valleys support more than 800 different plant species and a wealth of animal life. The park contains 61 species of management concern, including 5 cave-adapted macroinvertebrates and 8 alpine plants.





The story of the Great Basin includes not only ecology, geology, and landforms, but also people. For more than 13,000 years, people have lived in and adapted to the Great Basin environment, even as that environment experienced profound changes. Native people have witnessed millennia of environmental change, from Paleo period post-glacial landscapes to increasing desert conditions during the Archaic period. People of the Fremont culture, and more recently Paiute and Shoshone peoples, also lived on park lands and in the surrounding area. Archeological sites, rock art, and traditional cultural places in the park illustrate the past and continuing presence of Native American peoples. People of European descent also built homes and livelihoods on lands now protected within the park. Miners, cattle ranchers, farmers, and sheepherders—all left their own distinctive mark on the landscape. Today, Great Basin National Park protects a variety of historic and cultural resources that attest to its long and varied history of human use. These sites, structures, and places shed light on the lives of people past and present, and they help us understand our own place in this Great Basin environment.

As the National Park Service strives to maintain, protect, and restore natural processes and ecosystems, outside activities continue to threaten park resources and values. Current threats include groundwater pumping from aquifers in neighboring valleys that may dry up park springs and seeps, proposed coal-fired power plants that may degrade air and water quality, the invasion of nonnative species to the detriment of native ecosystems, and global climate change that could transform the ecological makeup of the Great Basin. Climate change in particular could have far-reaching effects on natural communities, geologic processes, cultural resources, visitor experiences, and park facilities. However, the park preserves resources that document the surrounding climate conditions over the past million years, including fossils, cave formations, lake sediments, and evidence of human response to change in archeological sites. This accumulated evidence, along with the park's air quality, isolation, and elevation gradient, make the park an ideal place to observe and study climate change and its effects.

Great Basin National Park is located in a remote area with limited services, so visitors must plan ahead. The nearest airport with commercial service is located in Cedar City, Utah, 137 miles away. Major airports are found in Salt Lake City, Utah (234 miles), or Las Vegas, Nevada (291 miles). Visitors who make the journey are rewarded with a variety of recreational and educational opportunities, ranging from rigorous alpine hiking and backcountry stream fishing to stargazing or sightseeing along the Wheeler Peak Scenic Drive. Other visitor opportunities include cave tours and caving, astronomy programs, camping in developed campgrounds or at remote backcountry campsites, picnicking, bicycling, wildlife observation, nature walks, and several ranger-led programs. Because it is located far from developed urban areas, the national park offers visitors extensive opportunities for solitude, discovery, and appreciation of an unspoiled landscape and sky. A lack of artificial lighting, obtrusive noises, and air pollutants in the park and on surrounding lands creates ideal conditions for experiencing dark night skies, natural sounds, and clean desert air.

## Park Purpose

The purpose statement identifies the specific reason(s) for establishment of a particular park. The purpose statement for Great Basin National Park was drafted through a careful analysis of its enabling legislation and the legislative history that influenced its development. The park was established when the enabling legislation adopted by Congress was signed into law on October 27, 1986. The national park incorporates the former Lehman Caves National Monument, which had been designated on January 24, 1922, by presidential proclamation (see appendix A for the enabling legislation and other relevant legislation). The purpose statement lays the foundation for understanding what is most important about the park.

*GREAT BASIN NATIONAL PARK preserves an outstanding segment of the Great Basin, including old-growth bristlecone pines, rich biodiversity, Lehman Caves and other distinctive geologic features, expansive scenic views, and 13,000 years of human history for the inspiration, enjoyment, and scientific understanding of current and future generations.*

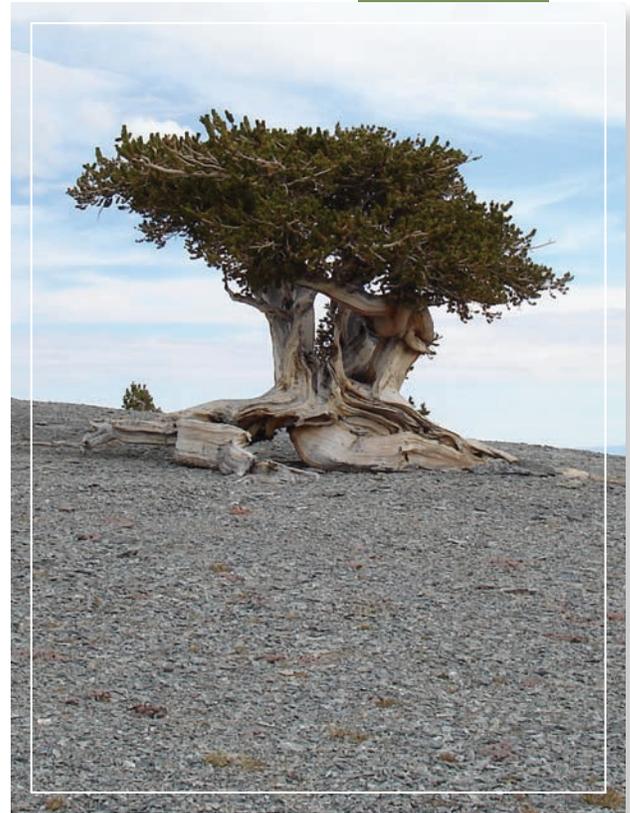


## Park Significance

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 Great Basin National Park, 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 Great Basin National Park. (Please note that the sequence of the statements does not reflect the level of significance.)

1. Great Basin National Park preserves an outstanding segment of the Great Basin geographic region and highlights its four defining characteristics: the Basin and Range topography; the hydrographic Great Basin, where no water flows to the sea; the Great Basin Desert, North America's largest; and the presence of numerous cultures over many millennia.
2. With nearly 8,000 feet of vertical relief, Great Basin National Park rises from the desert floor to alpine tundra, protecting exceptional biodiversity and providing an excellent example of island biogeography, where the surrounding desert has isolated plants and animals, forcing them to adapt and evolve.
3. Great Basin National Park protects iconic bristlecone pines, the oldest living trees on the planet, a remnant strain of Bonneville cutthroat trout once thought to be locally extinct, and several plant and animal species found nowhere else in the world.
4. Great Basin National Park showcases an exceptional combination of geologic features and processes, including historic Lehman Caves, classic Basin and Range topography, and glacially carved lakes, all crowned by 13,063 foot Wheeler Peak, the highest point in the central Great Basin.
5. Great Basin National Park protects and preserves valuable archeological and historical sites, historic structures, and traditional places that remain important to people of diverse backgrounds today. These resources enrich our understanding of people living in and adapting to the challenging mountain desert environment of the Great Basin for more than 13,000 years.
6. Due to its remote location, Great Basin National Park provides one of the best opportunities within the national park system for people to experience dark night skies, expansive views, peaceful natural sounds, solitude, and clean air.
7. The convergence of ecological factors, including climate, hydrology, pristine air quality, genetic isolation, relict communities, cave environs, and a steep elevation gradient, make Great Basin National Park a prime laboratory for studying global climate change. The park is uniquely positioned to contribute to the national and global understanding of climate change—one of the greatest challenges of our time.



## 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 Great Basin National Park:

- **Caves, Karst, and Cave-Forming Processes, Including Lehman Caves.** Great Basin National Park contains the longest, deepest, and highest elevation caves in Nevada and one of the highest concentration of caves in the Great Basin. Because roughly half of the park consists of karst topography, there is a high potential for many additional cave discoveries. Likewise, the geologic and hydrological cave-forming processes are ongoing and protected in the park, yielding a continual development and evolution of caves and cave formations. Lexington Arch is an outstanding example of a remnant cave system. These cave systems support many endemic species such as the Model Cave amphipod and the Lehman Caves pseudoscorpion, as well as several species of bats, including the Townsend's big-eared bat. Caves are also a repository of paleontological resources for study of regional faunal change. Caves used as shelter by people over 13,000 years may contain important archeological information. The park's signature cave, Lehman Caves, was originally protected as Lehman Caves National Monument prior to the establishment of the national park and contains more than 300 shield formations.



- **Water Resources.** Great Basin National Park protects 10 perennial streams in an arid desert environment, 6 sub-alpine lakes, and 425 perennial springs, as well as the interaction of groundwater and surface water in its many caves. The cave-forming processes and endemic cave biota are dependent on these natural hydrological processes. Water resources provide habitat for many aquatic species, including the native Bonneville cutthroat trout, springsnails, and other native aquatic species. Stream corridors and periodic flooding also provide essential conditions for the survival of riparian plant and animal communities in a desert environment. Four of the park's natural springs serve as public water supplies for visitors and staff and the park serves as a watershed for public water supplies in the surrounding valleys.
- **Evidence of Past and Current Climate Change.** Great Basin National Park preserves important resources that document the surrounding climate conditions over the past million years. These resources include: cave formations (speleothems), lake sediment cores, packrat middens, cirques and other glacial features, bristlecone pines, fossils, and evidence of human response to change in archeological sites. These resources provide unique periods of reference from multiple lines of evidence that can help inform projections of future climate patterns and changes.
- **Intact Great Basin Ecosystems.** Great Basin National Park protects a wide range of biological diversity and ecological systems representative of the Great Basin. Due to the almost 8,000-foot vertical gradient in the park, the ecosystems range from desert scrub to montane forests to alpine tundra. Healthy populations of native plants and animals are found throughout the park, including species endemic to the park or the nearby area.
- **Ancient Bristlecone Pines.** Found on windswept ridges and moraines, ancient bristlecone pines are the iconic species of Great Basin National Park. Great Basin National Park protects some of the oldest and most expansive groves of bristlecone pines, the oldest trees on earth, which can survive more than 5,000 years. Their twisted and gnarled forms connect us to an ancient past. As an iconic species, bristlecones are a major draw for visitors, who can access ancient groves via a moderate hike. By cross-dating with dead downed trees, a complete climate record of more than 7,000 years has been compiled. In addition to the famous ancient groves, the park also contains mesic groves at lower elevations, where bristlecones have shorter lifespans, but still may live a thousand years.
- **Solitude.** Visitors to Great Basin National Park have opportunities to experience solitude because of the park's remoteness and limited park development. Abundant trails provide opportunities to experience areas where natural sounds predominate.
- **Scenic Views and Dark Night Skies.** The clean air and unique lack of artificial lighting and development inside and outside of the park enhances the color and contrast of landscape features, allows visitors to see great distances, and provides panoramic views of the naturally dark night skies.
- **Representative Resources of the Great Basin's 13,000 Years of Human History.** Unique and important archeological sites, historic structures, cultural landscapes, and ethnographic resources offer insight into 13,000 years of human interaction with the desert, providing opportunity to understand our place in this Great Basin environment. Over the millennia, native cultures experienced environmental change from Paleo period post glacial landscapes to Archaic adaptations for increasing desert conditions. Fremont farming and foraging and the continuing life of Paiute and Shoshone people are evident in archeological sites, rock art, and traditional cultural places of the park. Historic structures and sites and cultural landscapes reflect the growing economy of the Western United States from the late 1800s through modern times, preserving a tangible link to generational history and connection with larger regional, American, and world history.

## 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 Great Basin National Park:

- The park showcases the key features of the Great Basin, where rugged topography, inland drainage, and a high cold desert climate create a unique, but vulnerable, landscape.
- Over millions of years the forces of water, mountain building, and climatic change, shaped and then decorated the delicate formations in Lehman Caves; and yet, human activities can change this fragile environment in an instant.
- Abrupt elevation gain from the desert lowlands to the alpine peaks creates distinct habitat zones, nurtures exceptional biodiversity, and isolates plant and animal communities—forcing them to adapt or die.
- As the oldest living trees on the planet, bristlecone pines teach us inspiring stories of survival and longevity under harsh conditions.
- Great Basin National Park offers an increasingly rare opportunity to view a natural dark night sky, provoking contemplation, inspiration, and wonder.



- Great Basin National Park’s vast and remote natural setting offers exceptional opportunities for solitude, introspection, and contemplation.
- Capturing more than 13,000 years of human experience, Great Basin National Park presents a continuous tapestry of people living and thriving within this challenging high desert environment.
- Great Basin National Park is a living laboratory for the study of climate change, where that change has shaped the landscape and continues to impact all forms of life.

## 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 Great Basin National Park.

For a comprehensive inventory of the existing special mandates and administrative commitments for Great Basin National Park, 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 (see appendix B)
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 Great Basin National Park and the associated planning and data needs to address them:

- **Water.** The Southern Nevada Water Authority (SNWA), which services the Las Vegas area, has proposed a pipeline from Snake Valley and Spring Valley to supply pumped groundwater from local aquifers to be used as municipal water for the Clark County, Nevada region. This proposal, along with a current rise in local demand, could impact the park's water tables, with disruptions to caves, surface hydrology and water supply, ultimately impacting visitor use. The US Geological Survey (USGS) identified the karst-limestone zone on the east side of the park as susceptible to groundwater withdrawals, affecting both Lehman and Baker Creeks and numerous caves. There are some ongoing issues with understanding and protecting water rights and there is potential for further issues as Las Vegas looks for more water. Added to this is the uncertainty involved with a projected warming climate, potentially changing future precipitation and evapo-transpiration patterns.
  - Associated plans and/or data needs include: resource stewardship strategy, strategic plan, climate change response plan, fire management plan.
- **Fire Management.** The lack of a robust prescribed fire program puts the park at risk for catastrophic fires, especially when coupled with increasing fire frequency and intensity due to climate change. Fire suppression has negatively impacted plant communities and ecosystem processes in the park. Aspen and sagebrush in particular need active management on a large scale to return them to a desired condition. This issue is overarching and impacts multiple park resources such as infrastructure, cultural resources, visitor safety, wildlife, fisheries, and hydrology. The current fire management plan is vague in some areas, particularly regarding how and under what conditions prescribed fire would be used.
  - Associated plans and/or data needs include: resource stewardship strategy, strategic plan, climate change response plan, fire management plan.



- **Backcountry Visitation and Management.**

The general management plan (1992) included a backcountry zoning concept, but the park has not implemented it. Balancing visitation with protection of fundamental resources and values is a challenge. Baker Lake is currently impacted by increasing backcountry camping use. Establishment of visitor capacity standards, use limits, and a comprehensive evaluation of recreational use in the backcountry are needed to address this challenge. In addition, visitor and staff safety are affected by communication issues in the backcountry. Communication infrastructure is not adequate for reliable backcountry communication.

- Associated plans and/or data needs include: backcountry management plan.

- **Strategic Planning.** The park lacks a multiyear plan for operations and funding that is guided by a long-term vision for the park. This is further complicated by dwindling base funds, which make it harder to hire employees to provide visitor services, interpretation, and law enforcement, fire management, and resource management. Southern Nevada Public Land Management Act (SNPLMA) funds have enabled the park to work on needed projects and hire the necessary people, but the park lacks a formal plan for post-SNPLMA operation and organizational structure.

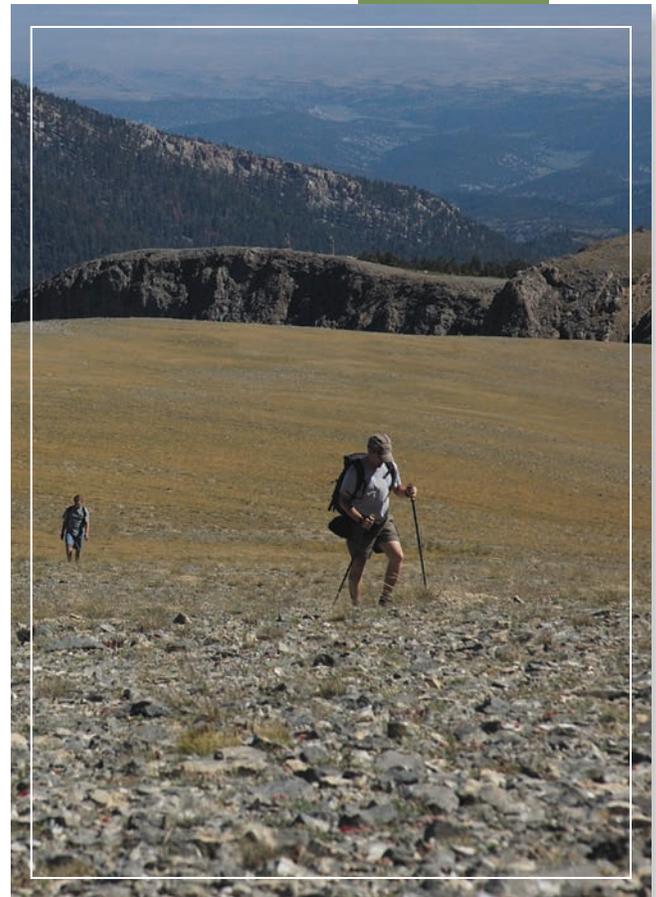
- Associated plans and/or data needs include: strategic plan.

- **Facilities.** The park lacks sufficient housing and office space for temporary and permanent staff. The lack of adequate housing opportunities makes recruitment and retention of staff difficult. Solutions that don't create unworkable long-term maintenance and janitorial needs are needed, because maintenance capacity is already stretched thin. Various boneyards and storage facilities are scattered around the park. The electrical system in Lehman Caves is faltering. A lack of staff and funding makes it difficult to care for older facilities (which require more resources).

- Associated plans and/or data needs include: strategic plan, vehicle management plan.

- **Limited Cave Management Guidance.** The park has 46 known caves but lacks formal guidance to manage them. The environments of the caves are mosaics of interdependent structural, climatic, and ecologic relationships that harbor isolated biological communities and endemic species, unique geologic processes, and important microclimates. Subsurface and surface biology, geology, and hydrology interact in complex ways to support these unique environments. These fragile relationships are poorly understood, placing them at continual risk due to visitor and staff use, climate change, water uses, and other external factors. At Lehman Caves, this includes visitation by more than 30,000 people per year. The park also lacks guidance on management of cultural resources in and related to the caves, including ethnographic resources. In addition, the caves and their use by both bats and people are threatened by white-nose syndrome, a fungus that is decimating bat populations nationwide as it moves across the country.

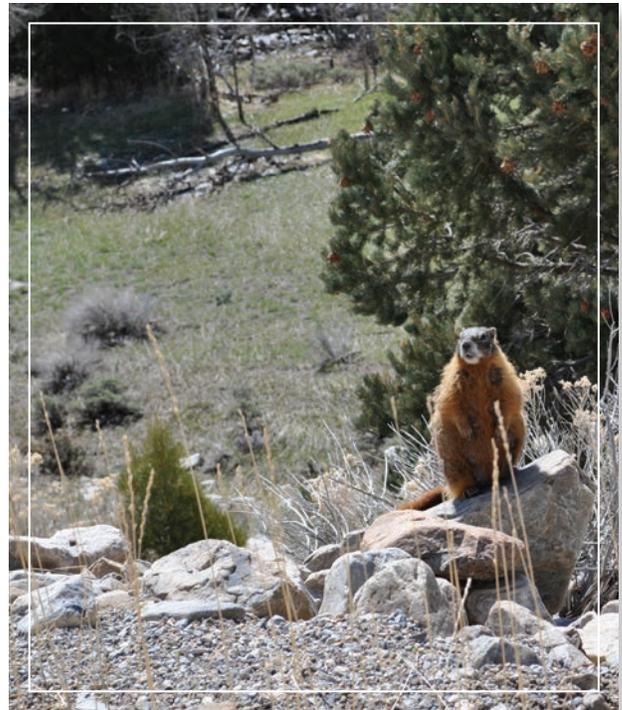
- Associated plans and/or data needs include: cave and karst management plan, resource stewardship strategy, climate change response plan.



## Other Important Issues

In addition to the key issues described above, several other important park issues were identified:

- **Cultural Resources Direction.** Cultural resources located within the park include historic structures, as well as historic and prehistoric archeological sites. The park lacks baseline documentation on many of these resources. This lack of documentation, research, and guidance is problematic when making long-term management decisions for the program. Without this information, parkwide planning, community outreach, interpretive programming, and maintenance of partnerships with local tribes and organizations are made more difficult. A considerable amount of planning, inventory, and maintenance need to be done for existing resources. The park also lacks sufficient space for a growing museum collections inventory.
- **Native/Nonnative Species Management.** Although a vegetation management plan and an invasive plant management plan have been completed or are in the process of being completed, park staff lacks the resources necessary to implement these plans. The habitats of native animals need to be restored through the planting and reseeded of native plants and the removal of encroaching plant communities. Nonnative animal species, such as turkeys, need to be removed from the park before irreparable damage is done to the native plant and animal communities. The potential introduction of diseases to the park (particularly white-nose syndrome, diseases from domestic sheep transmitted to reintroduced bighorn populations, and white pine blister rust) is also a major concern. Sheep and cattle trespass onto the park every year. Livestock are known to be a vector of invasive plants and can transmit diseases to park wildlife, particularly domesticated sheep, which carry diseases to bighorn sheep. Cattle also diminish visitor experience for backcountry campers. Current fencing has not been successful in controlling cattle. Feral horses have the potential to arrive in the park soon. With climate change, high elevation species (including bristlecone pines and Bonneville cutthroat trout) have no nearby higher places to move, meaning that they disappear from the park as the climate warms and habitats move upslope.





- **Outreach.** Outreach to local communities, including tribes, is limited. Without this outreach, telling the stories of these communities, sharing timely information with them, and involving them fruitfully in the management of the park are made more challenging. The park has the potential to provide a crucial resource for local students through interactions with staff with varying backgrounds in biology, ecology, geology, paleontology, botany, archeology, history, and astronomy. The volunteer program is another underused opportunity to make connections with the local communities.
- **Visitor Experiences.** More could be done to promote and strengthen a variety of visitor activities including nonmotorized winter recreation, accessible experiences, day use opportunities, and biking. Visitor information is often outdated, including trail signs, maps, interpretive panels, and waysides. Circulation issues include bicycles on narrow roadways and determining appropriate areas for vehicular access. Increasing use will eventually outpace the current infrastructure's ability to accommodate it and create demand for new activities. Proactive solutions are needed to address capacity and define appropriate new visitor activities.
- **Lands.** The park lacks control over access to many areas of the park. Without ownership, easements, or rights-of-way to places such as Snake Creek, Lexington Canyon, Strawberry, and all access points from Spring Valley, access could eventually be lost to these areas.
- **Viewsheds.** Scenic views are threatened by the potential for energy development in Snake and Spring and Hamlin Valleys. Light pollution threatens dark night skies. Dust from dirt roads, agriculture, and additional development can cause air quality issues.
- **Communication.** The park's communication infrastructure is inadequate, due primarily to its rugged mountainous terrain and aging technological infrastructure. Radios don't work in many areas of the park and serious IT limitations make data intensive activities, such as GIS tasks, difficult to accomplish. A lack of communications infrastructure creates and contributes to health and safety issues for both staff and visitors alike. These issues could become worse if more park staff are added.

## 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.

**Criteria and Considerations for Prioritization.** The following criteria were used to evaluate the priority of each planning or data need:

- Ability of the plan to address multiple or interrelated issues
- Emergency/urgency of the issue
- Prevention of resource degradation, particularly FRVs
- Ability to impact visitor use and experience
- Feasibility of completing the plan or study
- Opportunities, including interagency partnerships or other outside assistance
- Able to be undertaken with existing funding and staffing

## High Priority Planning Needs

### Fire Management Plan Update.

*Rationale* — Fire suppression has altered park ecosystems and puts iconic park species, ecosystems, and visual resources at risk. Reintroduction of fire to the park would help maintain species and ecosystem diversity. At this point, a large uncontrolled fire could result in long-term ecological change and could result in loss of life or property. As seen in the aftermath of a recent fire on the southern edge of the park, post-fire erosion may impact water resources, geologic resources, biologic resources, and park access. An updated fire management plan that addresses fuel loading and appropriate controlled reintroduction of fire to the park ecosystem is needed to maintain park ecosystems and scenic resources while minimizing negative impacts.

*Scope* — This effort would update the compliance for the existing fire management plan and integrate current knowledge on vegetation resources and management. The plan would also address safety and smoke management. The plan would lay out recommended projects, treatment areas, and a schedule of activities. The park would need assistance from fire specialists in the region to address safety and legal issues in the plan and to help implement prescribed fire.

## Cave and Karst Management Plan.

*Rationale* — Caves are an integral part of the park, identified in the park purpose and significance statements and as a fundamental resource. Lehman Caves are also one of the most visited park resources. As visitation to the park increases, so will pressure on cave resources—both in Lehman Caves and the 45 other known caves in the park. The 2016 National Speleological Society convention will be held in Ely, Nevada, less than an hour from the park, and will put a spotlight on park caves. The caves have important geologic, hydrologic, biological, cultural, and paleontological resources, and are part of larger interacting systems of these resources. Caves and karst resources also can provide information on historic climate change and will be affected by future climate change. Currently, carrying capacity for caves has not been established, nor have limits of acceptable change in caves. There are also monetary and staffing implications related to tour frequency in Lehman Caves and monitoring and restoration of all caves. Facility, restoration, and maintenance (cleaning) needs should be assessed, particularly for Lehman Caves.

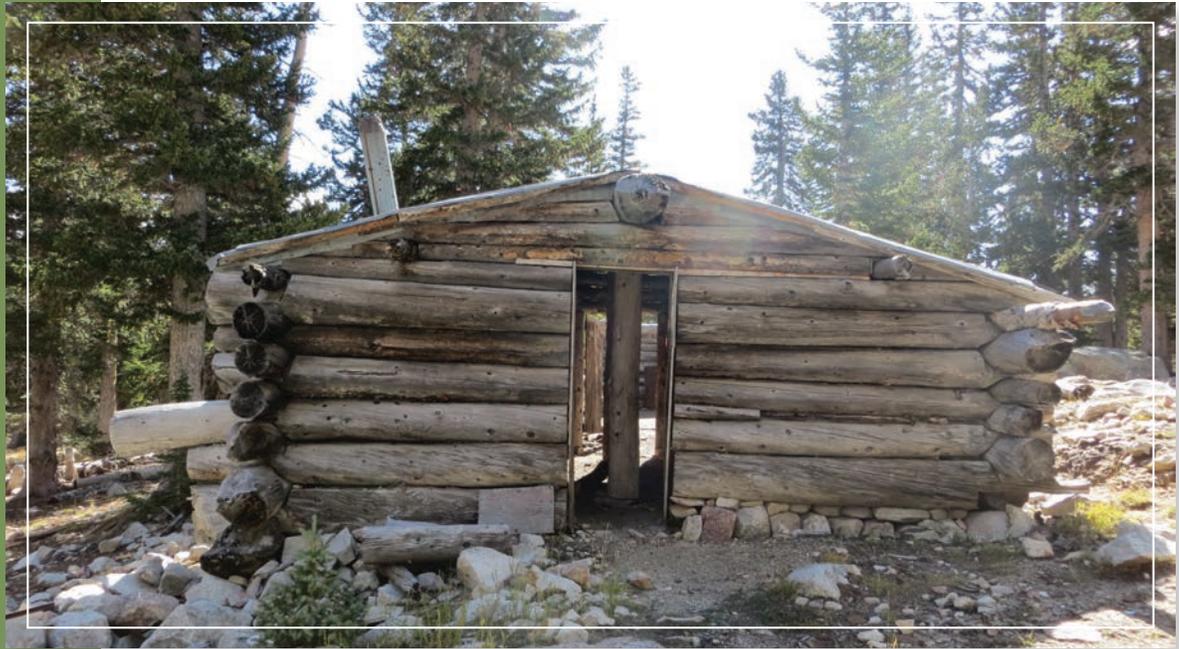
*Scope* — The cave and karst management plan would create a strategy for the management of park caves and karst. Objectives include determining carrying capacity, facility needs, restoration needs, and maintenance (cleaning) needs for Lehman Caves. Indicators and standards for impacts due to visitor use would be developed for cave and karst resources throughout the park, and a monitoring program to detect changes would be established. The plan would identify how to best comprehensively manage geologic, biological, hydrologic, cultural, and paleontological resources in caves, including evidence of past and current climate change. This plan should be completed prior to the 2016 National Speleological Society convention in Ely, Nevada.

## Resource Stewardship Strategy.

*Rationale* — A resource stewardship strategy is needed to identify what resources the park is managing, evaluate their current conditions, and define desired future conditions. The resource stewardship strategy would be based on the fundamental resources identified as part of the foundation process, but would more specifically identify the resources that the park will manage. A completed resource stewardship strategy is needed to prioritize natural and cultural resource projects and identify strategies to implement them. It would also provide accountability toward progress in attaining and maintaining desired resource conditions at the park.

*Scope* — The resource stewardship strategy is an analytical document focused on identifying and tracking indicators of desired conditions, recommending comprehensive strategies to achieve and maintain desired conditions over time, and assessing and updating these strategies periodically based on new information and the results of completed activities. The resource stewardship strategy would identify current and desired conditions for all natural and cultural resources in the park, and prioritize the required treatments and strategies. The park has a great deal of resource data that could be mined to determine current resource conditions. The resource stewardship strategy would also identify the human and fiscal resources needed to achieve the desired resource conditions, and would help guide other resource planning and management documents and compliance.





### **Historic Structures Plan.**

*Rationale* — Maintenance and treatment of historic structures at the park has been deferred for many years. These structures are deteriorating, and some have already been lost. There is also very little known about some of the historic structures. A historic structures plan would provide guidance, outline treatment strategies, establish priorities for the preservation and use of historic structures, and ensure National Historic Preservation Act compliance.

*Scope* — The historic structures plan would begin by inventorying historic structures and their current condition. Structures would be evaluated for significance and national register eligibility, and desired future condition and appropriate use for each building would be identified. The necessary treatments and maintenance schedules would be identified following The Secretary of the Interior’s Standards for Treatment of Historic Structures, and treatments prioritized. Structures appropriate for interpretation and adaptive reuse would be identified. Treatment plans and priorities would fall under a few broad categories, including ruins, occupied structures, structures for public use and access, and structures maintained and used for their original purpose. The assistance of a historic architect would be required for evaluating structures and recommending treatments.

### **Strategic Plan.**

*Rationale* — The park has a need for coordinated direction, where all divisions work together as a unit towards common goals to protect park resources. In addition, as SNPLMA funding disappears, the park needs a plan to deal with new budget realities. Staffing, facilities (including housing), use, and budget all need more thought and planning.

*Scope* — This plan would develop a 5- to 10-year vision for the park including the most important priorities and how to accomplish what is needed. Components of the plan would include mission and vision statements, as well as strategies and actions to address staffing, budget prioritization and planning (including consideration of multiple budget scenarios), and facilities issues (including housing). A visitor use and socioeconomic study would be useful as background data in order to determine a vision that is responsive to visitor and community needs.

### Climate Change Response Planning.

*Rationale* — Climate change could pose a major threat to park resources, and is a major focus of the National Park Service nationwide. Great Basin has a unique opportunity to study and interpret climate change given its steep topography and range of ecosystems. Climate change understanding has greatly increased in recent years, and Great Basin should take advantage of this to both help advance further understanding and plan for its own future. Climate change scenarios need to be developed and considered so that the park can develop appropriate responses in advance. Species loss, changes in fire regime, and other impacts might be minimized if they are addressed promptly.

*Scope* — Climate change response planning would begin with condition assessments, a vulnerability assessment, and climate change scenario planning. The effort would synthesize existing data, downscale existing models, perform additional targeted modeling for key species, and assess the exposure, vulnerability, and adaptive capacity of natural resources, cultural sites, and facilities. Using this information, management and response strategies would be developed and prioritized to mitigate climate change impacts on park resources. These strategies could be developed as stand-alone efforts or as parts of other plans (such as the fire management plan, resource stewardship strategy, cave and karst management plan, historic structures plan, and others).

### Backcountry Management Plan.

*Rationale* — Backcountry visitor use in the park has been gradually but steadily increasing, but the park has no formal plan, standards, or policies in place regarding backcountry use. Though backcountry use is generally low, it is concentrated in a few locations that are beginning to show signs of overuse. Solitude has been identified as a fundamental value of Great Basin and is best experienced in the backcountry. Increasing backcountry use in concentrated locations threatens those opportunities for solitude.

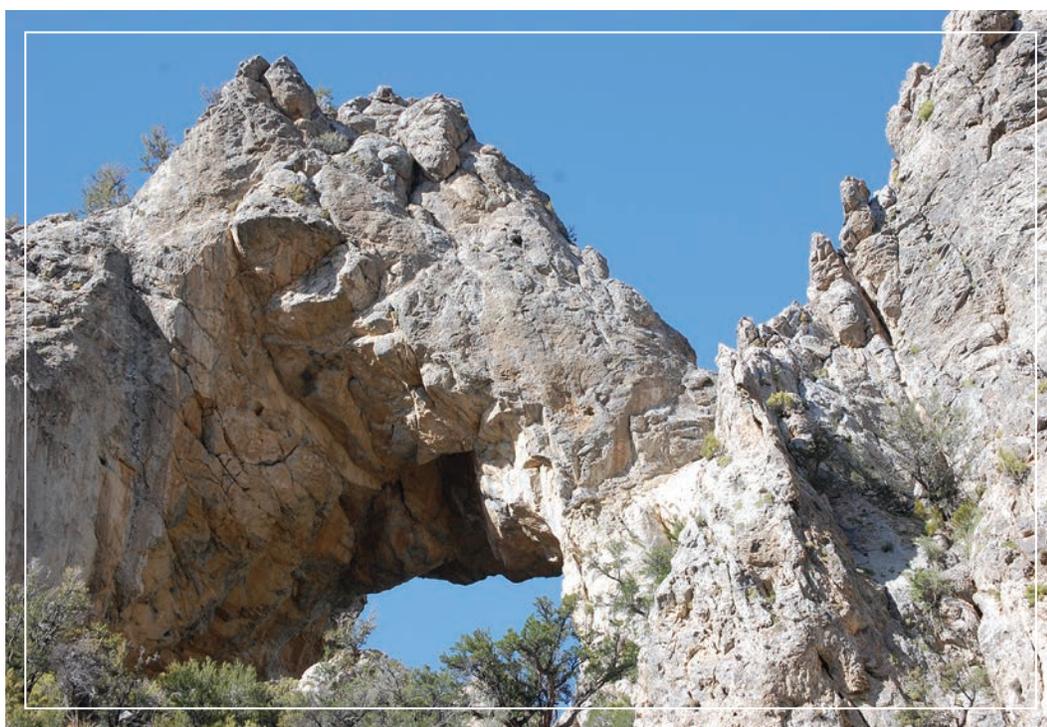
*Scope* — The plan would formalize backcountry zoning, development (campsites, trails, signs, etc.), and establish visitor capacity standards. The plan would outline a monitoring program and establish indicators and standards for visitor impacts. Prior to developing the plan, the park would need to collect data on current backcountry usage and trail and campsite conditions.



## Summary of High and Medium Priority Planning and Data Needs

| Planning or Data Needs                                                                                                                      | Priority (H, M) |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>Natural Resources</b>                                                                                                                    |                 |
| <b>Plans</b>                                                                                                                                |                 |
| Fire management plan update                                                                                                                 | H               |
| Cave and karst management plan                                                                                                              | H               |
| Climate change response planning                                                                                                            | H               |
| Resource stewardship strategy                                                                                                               | H               |
| Turkey management plan                                                                                                                      | M               |
| Bighorn sheep management plan                                                                                                               | M               |
| Fisheries management plan update                                                                                                            | M               |
| <b>Data Needs and Studies</b>                                                                                                               |                 |
| Cave condition report update                                                                                                                | M               |
| Long-term monitoring to understand climate change impacts on native species                                                                 | M               |
| Updated cave survey and mapping                                                                                                             | M               |
| Bat inventories and monitoring                                                                                                              | M               |
| Inventories and monitoring of other cave biota                                                                                              | M               |
| Cave climate data                                                                                                                           | M               |
| Water monitoring in caves (water quality and water quantity)                                                                                | M               |
| Additional dye-tracing in Baker and Snake Creeks to determine flow paths                                                                    | M               |
| Studies to examine pollution dose-response relationships in sensitive park ecosystems, in particular acid-sensitive high elevation lakes    | M               |
| Study whether dust from Baker Creek Road is degrading views                                                                                 | M               |
| <b>Cultural Resources</b>                                                                                                                   |                 |
| <b>Plans</b>                                                                                                                                |                 |
| Cultural resource management plan                                                                                                           | H               |
| Historic structures plan                                                                                                                    | H               |
| Lehman Orchard cultural landscape report                                                                                                    | M               |
| Lehman Aqueduct cultural landscape report                                                                                                   | M               |
| Baker Ranger Station historic structures report / cultural landscape report                                                                 | M               |
| <b>Data Needs and Studies</b>                                                                                                               |                 |
| HABS/HAER/HALS documentation for historic structures in the park                                                                            | M               |
| Ethnographic overview and assessment                                                                                                        | M               |
| National register documentation for historic and archeological resources                                                                    | M               |
| Cultural and paleontological resource inventory in caves                                                                                    | M               |
| Cultural landscape inventories for properties that have already been identified as potentials and for other potentially eligible properties | M               |

| Planning or Data Needs                                              |  | Priority<br>(H, M) |
|---------------------------------------------------------------------|--|--------------------|
| <b>Visitor Experience</b>                                           |  |                    |
| <b>Plans</b>                                                        |  |                    |
| Backcountry management plan                                         |  | H                  |
| Long-range interpretive plan                                        |  | M                  |
| Winter use plan                                                     |  | M                  |
| Multimodal (bicycle, winter, auto, pedestrian) connections planning |  | M                  |
| Mount Washington Research Natural Area management plan              |  | M                  |
| Volunteer and outreach strategy                                     |  | M                  |
| Wayside plan                                                        |  | M                  |
| Parkwide sign plan                                                  |  | M                  |
| Visual resource inventory and scenery conservation plan             |  | M                  |
| <b>Data Needs and Studies</b>                                       |  |                    |
| Socioeconomic study                                                 |  | M                  |
| Visitor use study                                                   |  | M                  |
| Campground visitor capacity study                                   |  | M                  |
| Wilderness studies                                                  |  | M                  |
| <b>Facilities</b>                                                   |  |                    |
| Vehicle management plan                                             |  | M                  |
| <b>Park Operations</b>                                              |  |                    |
| Strategic plan                                                      |  | H                  |





## Part 3: Contributors

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# Appendixes

## Appendix A: Enabling Legislation and Legislative Acts for Great Basin National Park

Lehman Caves National Monument established January 24, 1922 by Presidential Proclamation (PP1618, 42 Stat. 2260).

January 24, 1922.

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA.

### A PROCLAMATION.

Lehman Caves National Monument, Nev. Preamble.

WHEREAS, certain natural caves, known as the Lehman Caves, which are situated upon partly surveyed lands within the Nevada National Forest in the State of Nevada, are of unusual scientific interest and importance, and it appears that the public interests will be promoted by reserving these caves with as much land as may be necessary for the proper protection thereof, as a National Monument.

Setting aside National Monument, Nevada. Vol. 34, p. 225.

NOW, THEREFORE, I, Warren G. Harding, 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, all tracts of land in the State of Nevada shown as the Lehman Caves National Monument on the diagram forming a part hereof.

Use of Nevada National Forest not affected. Vol. 40, p. 1928.

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 Nevada 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.

Reserved from settlement, etc.

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 twenty-fourth day of January, in the year of our Lord one thousand nine hundred and twenty-two; and of the Independence of the United States of America the one hundred and forty-sixth.

WARREN G. HARDING

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

**Great Basin National Park established October 27, 1986  
(P.L. 99-565, 100 Stat. 3181).**

PUBLIC LAW 99-565—OCT. 27, 1986

100 STAT. 3181

Public Law 99-565  
99th Congress

**An Act**

To establish a Great Basin National Park in the State of Nevada, and for other purposes.

Oct. 27, 1986  
[S. 2506]

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

Great Basin  
National Park  
Act of 1986.

**SHORT TITLE**

**SECTION 1.** This Act may be known as the “Great Basin National Park Act of 1986”.

16 USC 410mm  
note.

**ESTABLISHMENT**

**SEC. 2.** (a) In order to preserve for the benefit and inspiration of the people a representative segment of the Great Basin of the Western United States possessing outstanding resources and significant geological and scenic values, there is hereby established the Great Basin National Park (hereinafter in this Act referred to as the “park”).

16 USC 410mm.

(b) The park shall consist of approximately seventy-six thousand acres, as depicted on the map entitled “Boundary Map, Great Basin National Park, Nevada,” numbered NA-GB 20,017, and dated October 1986. The map shall be on file and available for public inspection in the offices of the National Park Service, Department of the Interior, and the Office of the Superintendent, Great Basin National Park, Nevada.

Public  
information.

(c) Within 6 months after the enactment of this Act, the Secretary of the Interior (hereinafter in this Act referred to as the “Secretary”) shall file a legal description of the park designated under this section with the Committee on Interior and Insular Affairs of the United States House of Representatives and with the Committee on Energy and Natural Resources of the United States Senate. Such legal description shall have the same force and effect as if included in this Act, except that the Secretary may correct clerical and typographical errors in such legal description and in the map referred to in subsection (a). The legal description shall be on file and available for public inspection in the offices of the National Park Service, Department of the Interior.

Public  
information.

(d)(1) The Lehman Caves National Monument, designated on January 24, 1922, by Presidential proclamation under the authority contained in the Act of June 8, 1906 (34 Stat. 225) is hereby abolished and the lands incorporated within the Great Basin National Park. Any reference in any law, map, regulation, document, record, or other paper of the United States to such national monument shall be deemed to be a reference to Great Basin National Park.

(2) Any funds available for purposes of the national monument shall be available for purposes of the park.

ADMINISTRATION

Conservation.  
Fish and fishing.  
Wildlife.  
16 USC  
410mm-1.

SEC. 3. (a) The Secretary shall administer the park in accordance with this Act and with the provisions of law generally applicable to units of the national park system, including the Act entitled "An Act to establish a National Park Service, and for other purposes," approved August 26, 1916 (39 Stat. 535; 16 U.S.C. 1-4). The Secretary shall protect, manage, and administer the park in such manner as to conserve and protect the scenery, the natural, geologic, historic, and archaeological resources of the park, including fish and wildlife and to provide for the public use and enjoyment of the same in such a manner as to perpetuate these qualities for future generations.

(b) The Secretary shall permit fishing on lands and waters under his jurisdiction within the park in accordance with the applicable laws of the United States and the State of Nevada, except that he may designate zones where, and periods when, no fishing may be permitted for reasons of public safety. Except in emergencies, any regulations prescribing such restrictions relating to fishing, shall be put into effect only after consultation with the appropriate State agency having jurisdiction over fishing activities.

(c) After notice and opportunity for public hearing, the Secretary shall prepare a management plan for the park. The Secretary shall submit such plan to the Committee on Interior and Insular Affairs of the United States House of Representatives and with the Committee on Energy and Natural Resources of the United States Senate within three years after the enactment of this Act. Such plan may be amended from time to time. The plan shall include, but not be limited to, provisions related to grazing within the park to the extent permitted under subsection (e) and provisions providing for the appropriate management of fish and wildlife and fishing within the park in accordance with subsection (b). Such provisions shall be adopted only after consultation with the appropriate State agency having jurisdiction over fish and wildlife.

(d) Subject to valid existing rights, Federal lands and interests therein, within the park, are withdrawn from disposition under the public lands laws and from entry or appropriation under the mining laws of the United States, from the operation of the mineral leasing laws of the United States, and from operation of the Geothermal Steam Act of 1970, as amended.

30 USC 1001  
note.

(e) Subject to such limitations, conditions, or regulations as he may prescribe, the Secretary shall permit grazing on lands within the park to the same extent as was permitted on such lands as of July 1, 1985. Grazing within the park shall be administered by the National Park Service.

(f) At the request of the permittee, or at the initiative of the Secretary, negotiations may take place at any time with holders of valid existing grazing permits on land within the park, for an exchange of all or part of their grazing allotments for allotments outside the park. No such exchange shall take place if, in the opinion of the affected Federal land management agency, the exchange would result in overgrazing of Federal lands.

(g) Existing water-related range improvements inside the park may be maintained by the Secretary or the persons benefitting from them, subject to reasonable regulation by the Secretary.

(h) Nothing in this Act shall be construed to establish a new express or implied reservation to the United States of any water or water-related right with respect to the land described in section 2 of

PUBLIC LAW 99-565—OCT. 27, 1986

100 STAT. 3183

this Act: *Provided*, That the United States shall be entitled to only that express or implied reserved water right which may have been associated with the initial establishment and withdrawal of Humboldt National Forest and the Lehman Caves National Monument from the public domain with respect to the land described in section 2 of this Act. No provision of this Act shall be construed as authorizing the appropriation of water, except in accordance with the substantive and procedural law of the State of Nevada.

(i) In order to encourage unified and cost-effective interpretation of the Great Basin physiographic region, the Secretary is authorized and encouraged to enter into cooperative agreements with other Federal, State, and local public departments and agencies providing for the interpretation of the Great Basin physiographic region. Such agreements shall include, but not be limited to, authority for the Secretary to develop and operate interpretive facilities and programs on lands and waters outside of the boundaries of such park, with the concurrence of the owner or administrator thereof.

State and local governments.

#### ACQUISITION OF LAND

SEC. 4. (a) The Secretary may acquire land or interests in land within the boundaries of the park by donation, purchase with donated or appropriated funds, or exchange, but no such lands or interests therein may be acquired without the consent of the owner thereof. Lands owned by the State of Nevada or any political subdivision thereof may be acquired only by donation or exchange.

16 USC  
410mm-2.

(b) Lands and waters, and interests therein, within the boundaries of the park which were administered by the Forest Service, United States Department of Agriculture prior to the date of enactment of this Act are hereby transferred to the administrative jurisdiction of the Secretary to be administered in accordance with this Act. The boundaries of the Humboldt National Forest shall be adjusted accordingly.

#### AUTHORIZATION OF APPROPRIATIONS

SEC. 5. (a) Not more than \$800,000 are authorized to be appropriated for development of the park.

16 USC  
410mm-3.

(b) Not more than \$200,000 are authorized to be appropriated for acquisition of lands and interests in land within the park.

Approved October 27, 1986.

## Transfer of Public Lands, November 5, 1990 (P.L. 101-512, 104 Stat. 1977)

PUBLIC LAW 101-512—NOV. 5, 1990

104 STAT. 1977

“(5) \$200,000,000 or more, then coverage under the Act shall extend only to loss or damage in excess of the first \$200,000, of loss or damage to items covered.”

**TITLE IV—MISCELLANEOUS****SEC. 401. SENSE OF CONGRESS.**Buy American.  
20 USC 951 note.

It is the sense of the Congress that a recipient (including a nation, individual, group, or organization) of any form of subsidy, aid, or other Federal assistance under the Acts amended by this Act should, in expending that assistance, purchase American-made equipment and products.

**SEC. 402. NOTICE.**

20 USC 951 note.

Any entity that provides a form of subsidy, aid, or other Federal assistance under the Acts amended by this Act shall provide to each recipient of such form of subsidy, aid, or other Federal assistance a notice describing the sense of the Congress stated under section 401.

**SEC. 403. EFFECTIVE DATES.**

20 USC 951 note.

(a) **GENERAL EFFECTIVE DATE.**—Except as provided in subsection (b), this Act and the amendments made by this Act shall take effect on October 1, 1990.

(b) **SPECIAL EFFECTIVE DATE.**—The amendments made by sections 110, 204, and 301 shall take effect on the date of the enactment of this Act or October 1, 1990, whichever is earlier.

**SEC. 319.** None of the funds made available by this or any other Act with respect to any fiscal year may be used by the Department of the Interior or the Forest Service, Department of Agriculture to make any reimbursements to any other Federal department for litigation costs associated with the Prince William Sound oilspill.

**SEC. 320.** Section 1352(e)(2)(c) of subchapter III of chapter 13 of title 31, United States Code, as contained in section 319 of Public Law 101-121 is hereby amended by adding after “\$150,000,” the following: “or the single family maximum mortgage limit for affected programs, whichever is greater.”

**SEC. 321.** None of the funds provided in this Act may be expended by the Forest Service or the Bureau of Land Management to implement a new fee schedule or increase the fees charged for communication site use of lands administered by the Forest Service or Bureau of Land Management above the levels in effect on January 1, 1989.

**SEC. 322.** None of the funds appropriated by this Act may be used to ensure that hardwood saw timber harvested from Federal lands east of the 100th meridian is marked in such a manner as to make it readily identifiable at all times before its manufacture.

**SEC. 323.** Those public lands, more particularly described as the B½ NW¼ section 9, T13N, R70E, M.D.M. are hereby withdrawn and reserved as an administrative site under the jurisdiction of the National Park Service for the purposes of Great Basin National Park. The General Services Administration is hereby authorized to transfer to the National Park Service any excess lands and improvements under its jurisdiction within the aforesaid lands on a nonreimbursable basis.

**SEC. 324.** None of the funds available to the Advisory Council on Historic Preservation may be used to process comments on undertakings of Federal agencies, as specified in sections 106 and 110 of

## Amendment to Great Basin National Park Act, 1996 (P.L. 104-134, 110 Stat. 1321-203)

SEC. 319. GREAT BASIN NATIONAL PARK.—Section 3 of the Great Basin National Park Act of 1986 (16 U.S.C. 410mm-1) is amended—

(1) in the first sentence of subsection (e) by striking “shall” and inserting “may”; and

(2) in subsection (f)—

(A) by striking “At the request” and inserting the following:

“(1) EXCHANGES.—At the request”;

(B) by striking “grazing permits” and inserting “grazing permits and grazing leases”; and

(C) by adding after “Federal lands.” the following:

“(2) ACQUISITION BY DONATION.—

(A) IN GENERAL.—The Secretary may acquire by donation valid existing permits and grazing leases authorizing grazing on land in the park.

(B) TERMINATION.—The Secretary shall terminate a grazing permit or grazing lease acquired under subparagraph (A) so as to end grazing previously authorized by the permit or lease.”.

## Creation of the Great Basin National Heritage Route, 2006 (P.L. 109-338, 120 Stat. 1824)

### SEC. 291. SHORT TITLE.

This subtitle may be cited as the “Great Basin National Heritage Route Act”.

### SEC. 291A. FINDINGS AND PURPOSES.

(a) FINDINGS.—Congress finds that—

(1) the natural, cultural, and historic heritage of the North American Great Basin is nationally significant;

(2) communities along the Great Basin Heritage Route (including the towns of Delta, Utah, Ely, Nevada, and the surrounding communities) are located in a classic western landscape that contains long natural vistas, isolated high desert valleys, mountain ranges, ranches, mines, historic railroads, archaeological sites, and tribal communities;

(3) the Native American, pioneer, ranching, mining, timber, and railroad heritages associated with the Great Basin Heritage Route include the social history and living cultural traditions of a rich diversity of nationalities;

(4) the pioneer, Mormon, and other religious settlements, and ranching, timber, and mining activities of the region played and continue to play a significant role in the development of the United States, shaped by—

(A) the unique geography of the Great Basin;

(B) an influx of people of Greek, Chinese, Basque, Serb, Croat, Italian, and Hispanic descent; and

(C) a Native American presence (Western Shoshone, Northern and Southern Paiute, and Goshute) that continues in the Great Basin today;

(5) the Great Basin housed internment camps for Japanese-American citizens during World War II, 1 of which, Topaz, was located along the Heritage Route;

(6) the pioneer heritage of the Heritage Route includes the Pony Express route and stations, the Overland Stage, and many examples of 19th century exploration of the western United States;

(7) the Native American heritage of the Heritage Route dates back thousands of years and includes—

(A) archaeological sites;

(B) petroglyphs and pictographs;

(C) the westernmost village of the Fremont culture;

and

(D) communities of Western Shoshone, Paiute, and Goshute tribes;  
(8) the Heritage Route contains multiple biologically diverse ecological communities that are home to exceptional species such as—

(A) bristlecone pines, the oldest living trees in the world;

(B) wildlife adapted to harsh desert conditions;

(C) unique plant communities, lakes, and streams; and

(D) native Bonneville cutthroat trout;

(9) the air and water quality of the Heritage Route is among the best in the United States, and the clear air permits outstanding viewing of the night skies;

(10) the Heritage Route includes unique and outstanding geologic features such as numerous limestone caves, classic basin and range topography with playa lakes, alluvial fans, volcanics, cold and hot springs, and recognizable features of ancient Lake Bonneville;

(11) the Heritage Route includes an unusual variety of open space and recreational and educational opportunities because of the great quantity of ranching activity and public land (including city, county, and State parks, national forests, Bureau of Land Management land, and a national park);

(12) there are significant archaeological, historical, cultural, natural, scenic, and recreational resources in the Great Basin to merit the involvement of the Federal Government in the development. in cooperation with the Great Basin Heritage Route Partnership and other local and governmental entities, of programs and projects to—

(A) adequately conserve, protect, and interpret the heritage of the Great Basin for present and future generations; and

(B) provide opportunities in the Great Basin for education; and

(13) the Great Basin Heritage Route Partnership shall serve as the local coordinating entity for a Heritage Route established in the Great Basin.

(b) PURPOSES.—The purposes of this subtitle are—

(1) to foster a close working relationship with all levels of government, the private sector, and the local communities within White Pine County, Nevada, Millard County, Utah, and the Duckwater Shoshone Reservation;

(2) to enable communities referred to in paragraph (1) to conserve their heritage while continuing to develop economic opportunities; and

(3) to conserve, interpret, and develop the archaeological, historical, cultural, natural, scenic, and recreational resources related to the unique ranching, industrial, and cultural heritage of the Great Basin, in a manner that promotes multiple uses permitted as of the date of enactment of this Act, without managing or regulating land use.

## Amendments to the Southern Nevada Public Land Management Act, 2006 (P.L. 109-432, 120 Stat. 3045)

### SEC. 382. AVAILABILITY OF SPECIAL ACCOUNT.

Section 4(e) of the Southern Nevada Public Land Management Act of 1998 (Public Law 105-263; 112 Stat. 2346; 116 Stat. 2007; 117 Stat. 1317; 118 Stat. 2414) is amended—

(I) by inserting “, the Great Basin National Park,” after “the Red Rock Canyon National Conservation Area”;

## Appendix B: Analysis of Fundamental Resources and Values

| Fundamental Resource or Value              | Caves, Karst, and Cave-Forming Processes, including Lehman Caves                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Significance Statements            | Significance statements 4, 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Current Conditions and Trends              | <p><b>Conditions</b></p> <ul style="list-style-type: none"> <li>• Lehman Caves has been impacted by more than 100 years of visitation and development.</li> <li>• Eight wild caves have some visitation impacts.</li> <li>• Other caves are in near-pristine condition.</li> <li>• Karst conditions are stable and not impacted.</li> <li>• Cave-forming processes, which depend on natural hydrologic conditions, are generally intact.</li> </ul> <p><b>Trends</b></p> <ul style="list-style-type: none"> <li>• The condition of Lehman Caves is trending downward due to the high level of visitation (nearly 30,000 per year) and the presence and declining condition of visitation infrastructure, principally the electrical system. All other caves are stable.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Threats and Opportunities                  | <p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Increased visitation and aging infrastructure and lack of maintenance/cleaning threaten the condition of Lehman Caves.</li> <li>• White-nose syndrome threatens bats and the cave ecosystem.</li> <li>• Groundwater withdrawal threatens cave ecosystems and species (amphipod), cave-forming processes, and cave climate.</li> <li>• Vandalism in caves threatens formations and processes.</li> <li>• Wildfires fire-fighting may indirectly threaten caves due to use of fire retardants washing into caves after fires.</li> <li>• Climate change effects on local and regional hydrology (surface and groundwater) could alter cave-forming processes.</li> </ul> <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• High cave visitation at Lehman Caves offers a great opportunity for educating visitors on cave ecology, bats, cave-forming processes, and hydrology.</li> <li>• Potential scientific studies on endemic cave species, cultural history, paleontology, potential impact of climate change, as well as studying previous climate change.</li> <li>• Using virtual cave tours would allow a possible reduction and management of visitation numbers.</li> <li>• Improve cave infrastructure.</li> <li>• Partnerships with local caving organizations to clean Lehman Caves and explore, survey, and inventory other wild caves.</li> <li>• Wild cave tours (i.e., guided tours to undeveloped caves).</li> <li>• Enhanced cave exhibits in Lehman Caves visitor center to improve understanding of cave resources.</li> </ul> |
| Existing Data and Plans Related to the FRV | <ul style="list-style-type: none"> <li>• 2006 cave condition report (maps, history).</li> <li>• Superintendent compendium related to cave management.</li> <li>• Multiple cave research papers.</li> <li>• Modest cave GIS mapping. Needs updating.</li> <li>• "Cave Biota of Great Basin National Park, White Pine County, Nevada," Taylor et al. 2008.</li> <li>• Lehman Caves mapping (needs completion).</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Fundamental Resource or Value                                                                              | Caves, Karst, and Cave-Forming Processes, including Lehman Caves                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Data and/or GIS Needs</b></p>                                                                        | <ul style="list-style-type: none"> <li>• Updated cave condition report.</li> <li>• Updated cave survey and mapping.</li> <li>• Bat inventories and monitoring.</li> <li>• Inventories and monitoring of other cave biota.</li> <li>• Cave climate data.</li> <li>• Water monitoring in caves (water quality and water quantity).</li> <li>• Cultural and paleontological resource inventory in caves including tribal input to identify ethnographic resources.</li> <li>• Additional dye-tracing in Baker and Snake Creek to determine flow paths.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>Planning Needs</b></p>                                                                               | <ul style="list-style-type: none"> <li>• Cave and karst management plan (includes Lehman caves and wild cave and karst).</li> <li>• Technical Assistance Request from Geologic Resources Division to develop strategy for lint reduction.</li> <li>• Update to existing Great Basin National Park fire management plan to address use of fire retardants.</li> <li>• Resource stewardship strategy.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance</b></p> | <p><b>Laws, Executive Orders, and Regulations That Apply to the FRV</b></p> <ul style="list-style-type: none"> <li>• Federal Cave Resource Protection Act of 1988</li> <li>• Paleontological Resources Protection Act</li> <li>• Archaeological Resources Protection Act of 1979</li> <li>• Archeological and Historic Preservation Act of 1974</li> <li>• Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources"</li> <li>• Executive Order 11593, "Protection and Enhancement of the Cultural Environment"</li> </ul> <p><b>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</b></p> <ul style="list-style-type: none"> <li>• NPS <i>Management Policies 2006</i> (chapter 4) "Natural Resource Management, including (4.8) "Geologic Resource Management"</li> <li>• NPS <i>Management Policies 2006</i> (chapter 5) "Cultural Resource Management"</li> <li>• Director's Order 28: <i>Cultural Resource Management</i> (1998)</li> <li>• Director's Order 28A: <i>Archeology</i> (2004)</li> <li>• <i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i></li> </ul> |



| Fundamental Resource or Value              | Water Resources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Significance Statements            | Significance Statements 1, 2, 4, 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Current Conditions and Trends              | <p><b>Conditions</b></p> <ul style="list-style-type: none"> <li>• Water resources and hydrological conditions are stable.</li> <li>• Lakes in the park are currently classified as acid-sensitive.</li> <li>• High mercury deposition, nitrogen deposition, and sulfur deposition has been documented. Atmospheric dry deposition of mercury in the park was among the highest measured in six western national parks.</li> <li>• Data on mercury in fish at three sites in the park indicate that mercury concentrations are relatively low as compared to other western national parks (Eagles-Smith et al. 2014). However, the State of Nevada has issued fish consumption guidance for mercury in fish at Lehman and Snake Creeks, both headwaters in the park (Nevada DOW 2012)”</li> </ul> <p><b>Trends</b></p> <ul style="list-style-type: none"> <li>• Nitrogen and sulfur deposition levels are stable (not increasing or decreasing) but far above the natural baseline. There is no trend information for mercury.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Threats and Opportunities                  | <p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Future plans for groundwater development and withdrawal threaten park water resources.</li> <li>• Sulfur and nitrogen compounds in air pollution can deposit into ecosystems and cause acidification, excess fertilization (eutrophication), and changes in soil and water chemistry that can affect community composition and alter biodiversity. Mercury can accumulate in the food chain and can affect both wildlife and human health. Roads and trails along the riparian corridors (and associated erosion and sedimentation) threaten park streams and wetlands.</li> <li>• Increased visitation (particularly backcountry visitation) may have future impacts on surface water condition.</li> <li>• Fire retardant use in wildfire suppression can threaten water quality if used inappropriately.</li> <li>• Climate change (and associated effects such as earlier snowmelts) threaten local and regional hydrologic patterns (surface and groundwater) as the average annual temperature is projected to increase, with a possible increase in flash-flood events as more frequent and intense storms are also projected for the region.</li> <li>• Construction of the Snake Creek Pipeline would severely impact the natural conditions of surface hydrology.</li> </ul> <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Educational opportunities for visitors to help them understand the importance of their role in water quality preservation in park, water conservation, and the interrelated nature of water and geology (e.g., via caves).</li> <li>• Develop a more holistic strategy on water monitoring.</li> </ul> |
| Existing Data and Plans Related to the FRV | <ul style="list-style-type: none"> <li>• “Water Resources of Great Basin National Park.” Prudic et al. 2014 (in press).</li> <li>• “Characterization of Surface-Water Resources in the Great Basin National Park Area and Their Susceptibility to Groundwater Withdrawals in Adjacent Valleys, White Pine County, Nevada.” Elliott, P. E., Beck, D. A., and Prudic, D. E., 2006.</li> <li>• National Park Service, Air Resources Division. “Air Quality Conditions &amp; Trends by NPS Units: Great Basin National Park, 2012 End Year.” National Park Service. Denver, CO. Accessed March 30, 2015. <a href="http://www.nature.nps.gov/air/data/products/parks/index.cfm">http://www.nature.nps.gov/air/data/products/parks/index.cfm</a>.</li> <li>• “Mercury in Fishes from 21 National Parks in the Western U.S.—Inter- and Intra-Park Variation in Concentrations and Ecological Risk.” Eagles-Smith, et al. 2014, prepared in cooperation with the NPS Air Resources Division. Available at <a href="http://pubs.usgs.gov/of/2014/1051/pdf/ofr2014-1051.pdf">http://pubs.usgs.gov/of/2014/1051/pdf/ofr2014-1051.pdf</a>.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Fundamental Resource or Value                                                                              | Water Resources                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <p><b>Existing Data and Plans Related to the FRV</b></p>                                                   | <ul style="list-style-type: none"> <li>• Wright, G., Sexauer Gustin, M., Weiss-Penzias, P., and Miller, M.B. 2013. "Investigation of mercury deposition and potential sources at six sites from the Pacific Coast to the Great Basin, USA." <i>Science of the Total Environment</i> 470–471: 1099–1113.</li> <li>• Nevada Department of Wildlife. 2012. Health Advisory Status for Eastern Nevada Waters. Accessed 25 February 2013 from <a href="http://www.ndow.org/Fish/Fish_Safety/Mercury/Health_Advisory_Status_of_Eastern_Nevada_waters/">http://www.ndow.org/Fish/Fish_Safety/Mercury/Health_Advisory_Status_of_Eastern_Nevada_waters/</a>.</li> <li>• "Evaluation of the sensitivity of inventory and monitoring national parks to acidification effects from atmospheric sulfur and nitrogen deposition: main report." Sullivan et al. (2011). Available at <a href="http://www.nature.nps.gov/air/Pubs/pdf/acidification/main_acidification-eval_2011-05.pdf">http://www.nature.nps.gov/air/Pubs/pdf/acidification/main_acidification-eval_2011-05.pdf</a>.</li> <li>• "Evaluation of the sensitivity of inventory and monitoring national parks to nutrient enrichment effects from atmospheric nitrogen deposition: main report." Sullivan et al. (2011). Natural Resource Report. NPS/NRPC/ARD/NRR—2011/313. National Park Service, Denver, Colorado. Available at <a href="https://irma.nps.gov/App/Reference/DownloadDigitalFile?code=427566&amp;file=main_n_sensitivity_2011-02_updated.pdf">https://irma.nps.gov/App/Reference/DownloadDigitalFile?code=427566&amp;file=main_n_sensitivity_2011-02_updated.pdf</a>.</li> <li>• Inventory and Monitoring annual updates.</li> <li>• National Weather Service Lehman Caves cooperative weather station data.</li> <li>• Snow survey data, Wheeler Peak snow telemetry site.</li> <li>• USGS Lehman Creek gauges.</li> <li>• Maintenance water quality sampling data.</li> <li>• Other USGS reports.</li> </ul> |
| <p><b>Data and/or GIS Needs</b></p>                                                                        | <ul style="list-style-type: none"> <li>• Continued water quality and quantity monitoring (including Lehman gauge).</li> <li>• Dye-tracing in Baker Creek and Snake Creek.</li> <li>• Continue snowpack telemetry.</li> <li>• Special studies to examine pollution dose-response relationships in sensitive park ecosystems, in particular acid-sensitive high elevation lakes.</li> <li>• Continued National Atmospheric Deposition Program monitoring.</li> <li>• Assess impact of mercury and other toxics on biota in the park, including invertebrates and fish, and better understand the ecosystem characteristics that enhance mercury methylation at the park.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p><b>Planning Needs</b></p>                                                                               | <ul style="list-style-type: none"> <li>• Water resource management plan.</li> <li>• Water resource monitoring strategy.</li> <li>• Resource stewardship strategy.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance</b></p> | <p><b>Laws, Executive Orders, and Regulations That Apply to the FRV</b></p> <ul style="list-style-type: none"> <li>• Regulations that protect state-classified outstanding waters in the State of Nevada (Pine, Ridge, Baker, and Lehman Creeks)</li> <li>• Clean Water Act</li> <li>• Clean Air Act (42 USC 7401) (related to mercury, nitrogen, and sulfur deposition)</li> <li>• Federal water rights</li> <li>• Nevada state water rights (Cave Springs, Baker and Lehman Creeks, in-stream flows on Snake, Baker, and Lehman Creeks)</li> <li>• Federal and state safe drinking water laws and standards</li> <li>• Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources"</li> </ul> <p><b>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</b></p> <ul style="list-style-type: none"> <li>• NPS <i>Management Policies 2006</i> (4.6) "Water Resource Management"</li> <li>• NPS <i>Management Policies 2006</i> (4.6.2) "Water Rights"</li> <li>• NPS <i>Management Policies 2006</i> (9.1.5.1) "Water Supply Systems"</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Fundamental Resource or Value              | Evidence of Past and Current Climate Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Significance Statements            | Significance statements 1, 2, 3, 4, 5, 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Current Conditions and Trends              | <p><b>Conditions</b></p> <ul style="list-style-type: none"> <li>Several resources in the park document the surrounding climate conditions over the past million years (including cave formations [speleothems], lake sediment cores, packrat middens, cirques and other glacial features, bristlecone pines, fossils, and evidence of human response to change in archeological sites). Collectively, these resources are stable and are being protected. Research access to these resources is permitted under very stringent conditions.</li> </ul> <p><b>Trends</b></p> <ul style="list-style-type: none"> <li>The current long-term trend has been increasing temperatures beyond one standard deviation from the 20th-century baseline and a slight predicted change in precipitation totals and timing.</li> </ul>                                                                                                                                                                                                                                                                                                                                              |
| Threats and Opportunities                  | <p><b>Threats</b></p> <ul style="list-style-type: none"> <li>Wildfires threaten bristlecones.</li> <li>Avalanches threaten bristlecones, access to lake sediment cores, and cave resources.</li> <li>Fire and vandalism threaten packrat middens and speleothems.</li> <li>Vandalism and illegal collecting threaten cave formations, cave fossils, and archeological sites.</li> <li>Public access and overuse threaten several of these resources.</li> </ul> <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>Require current and future researchers to provide public presentations and/or interpretive materials.</li> <li>Expand interpretive and educational tools to communicate the connections between current climate change, air quality/pollution, night sky, scenic views, water resources, Great Basin ecosystems, natural and cultural resource protection, human health, and other associated resources.</li> <li>Promote the park as a showcase for sustainability efforts by highlighting improvements completed and ongoing as part of the Climate Friendly Parks program.</li> <li>NPS support of climate research.</li> </ul> |
| Existing Data and Plans Related to the FRV | <ul style="list-style-type: none"> <li>Base maps and research reports on cave formations (speleothems), lake sediment cores, packrat middens, cirques and other glacial features, bristlecone pines, fossils, and evidence of human response to change in archeological sites.</li> <li>NPS Climate Friendly Parks Action Plan.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Data and/or GIS Needs                      | <ul style="list-style-type: none"> <li>Long-term monitoring to understand climate change impacts on native species.</li> <li>Finer-scale mapping of glacial features.</li> <li>Identification and dating of packrat middens.</li> <li>Paleontological surveys.</li> <li>Radiometric dating of fossil deposits.</li> <li>Uranium-lead dating of speleothems.</li> <li>Continue Global Observation Research Initiative in Alpine environments monitoring.</li> <li>Archeological surveys.</li> <li>Climate change monitoring and research strategy.</li> <li>Climate change research synthesis report of past research.</li> <li>Downscaling existing climate change models.</li> <li>Climate change modeling.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Fundamental Resource or Value                                                                | Evidence of Past and Current Climate Change                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Planning Needs                                                                               | <ul style="list-style-type: none"> <li>• Climate change response planning.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance | <p><b>Laws, Executive Orders, and Regulations That Apply to the FRV</b></p> <ul style="list-style-type: none"> <li>• Secretarial Order 3289, "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources"</li> </ul> <p><b>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</b></p> <ul style="list-style-type: none"> <li>• NPS Management Policies 2006 (4.2.1) "Inventory, Monitoring, and Research Studies"</li> <li>• NPS Management Policies 2006 (4.7.2) "Weather and Climate"</li> </ul> |



| Fundamental Resource or Value   | Intact Great Basin Ecosystems                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| Related Significance Statements | Significance statements 1, 2, 3, 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Current Conditions and Trends   | <p><b>Conditions</b></p> <ul style="list-style-type: none"> <li>• The full range of ecosystems is present in the park. Many are in excellent condition but some are threatened, including Great Basin wild rye, sagebrush, aspen communities, antelope bitterbrush, and alpine communities. (Note: The park does not contain lowest elevation ecosystems of the Great Basin, or ecosystems found in further-west portions of the Great Basin.)</li> <li>• All endemic plants in the park are found in the alpine ecosystem.</li> <li>• Alpine communities are in outstanding ecological condition except in the furthest southern region of the park due to trespass domestic sheep.</li> <li>• Most wildlife species of management concern are found in the shrub steppe system, including yellow-bellied marmots, pygmy rabbits, sagebrush voles, Merriam's shrews, and various bird species.</li> <li>• Bonneville cutthroat trout was once thought extirpated in the park and has now been restored to 47% of its historic stream reaches within the park.</li> <li>• Mottled sculpin has been essentially extirpated from the park; attempts to reintroduce have been marginal.</li> <li>• There are 25–30 bighorn sheep in the park, disease-free but of low genetic diversity. The population is limited by mountain lion predation. The sheep summer in the park and winter on Bureau of Land Management land.</li> <li>• The wildlife populations and food web in the park are robust. The main threats are due to habitat conversion.</li> <li>• There are currently no threatened/endangered listed species in the park, but there are several species of concern (potential for listing).</li> <li>• Wet sulfur deposition is estimated at 1.1 kilograms per hectare per year, and warrants significant concern (see "Threats").</li> <li>• Wet nitrogen deposition is estimated at 2.9 kilograms per hectare per year, and warrants moderate concern (see "Threats").</li> <li>• The park has little interference of ecosystem function and wildlife communication from noise and artificial light.</li> <li>• Ozone concentrations from 2008–2012 are at 71.7 parts per billion, which falls within the moderate concern category. Exposure of ozone to at least 6 ozone-sensitive plants, including aspen, Ponderosa pine, and chokecherry, warrants significant concern, especially during wetter years (see "Threats").</li> </ul> <p><b>Trends</b></p> <ul style="list-style-type: none"> <li>• Sagebrush ecosystems are downward trending.</li> <li>• Riparian systems and wet meadows are upward trending since the removal of grazing and need some continued weed management. These systems are potentially threatened by climate change.</li> <li>• Alpine ecosystems are upward trending after removal of sheep grazing, but are potentially threatened by climate change.</li> <li>• The bighorn sheep population is downward trending. Sheep have low recruitment (lamb survival) and high mortality rates due to mountain lion predation. The population is isolated, with little to no interaction with other herds. Habitat loss is occurring due to fire exclusion.</li> <li>• The trends in sulfur, nitrogen, and ozone deposition (2003–2012) remained relatively unchanged.</li> </ul> |

| Fundamental Resource or Value           | Intact Great Basin Ecosystems                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| <p><b>Threats and Opportunities</b></p> | <p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• The Great Basin wild rye ecosystem is threatened by invasive plants, and woody plant encroachment.</li> <li>• The sagebrush and antelope bitterbrush ecosystems are threatened by woody plant encroachment due to a history of fire exclusion and invasive grasses, particularly cheatgrass.</li> <li>• Aspen communities are threatened by fire exclusion and conifer encroachment.</li> <li>• Climate change effects on hydrology and/or groundwater withdrawal may shrink available water for the Bonneville cutthroat trout.</li> <li>• Rainbow trout exist in other stream systems separate from the Bonneville cutthroat trout, and if they were moved to Bonneville cutthroat trout streams they would be major competitors and aggressors.</li> <li>• Bighorn sheep could be threatened by the spread of disease from outside the park.</li> <li>• Most bighorn lambs do not survive. The reasons are unknown, but could be disease or mountain lion predation. Many ewes are killed by mountain lions as well.</li> <li>• Bighorn sheep are highly vulnerable to stochastic extinction due to the small population size and isolation.</li> <li>• Groundwater withdrawal would destroy riparian areas and wipe out less mobile species.</li> <li>• Increases between 5°F and 9°F in average annual temperature are projected for the region by 2100, which will impact the numerous ecosystems within the park.</li> <li>• Climate change could increase fire intensity and frequency.</li> <li>• Climate change may pose the most significant threat to alpine plant and animal species due to the limited available elevation for vertical migration.</li> <li>• Climate change may threaten riparian systems and wet meadows.</li> <li>• Air pollution deposition comes from regional and local sources such as power plants, oil and gas development, industrial facilities, agriculture, and urban developments.</li> <li>• A risk assessment concluded that Great Basin National Park may be very highly sensitive to acidification effects. Acidification of soils, lakes, and streams can result in changes in community structure, biodiversity, reproduction, and decomposition.</li> <li>• While Great Basin National Park ecosystems were rated as having low sensitivity to nutrient enrichment effects in a risk assessment, certain vegetation communities in the park, including the shrublands and grasslands, may be more vulnerable to excess nitrogen deposition, which can alter plant communities and reduce biodiversity. Invasive species, including cheatgrass and spotted knapweed, thrive in areas with high nitrogen deposition, displacing native vegetation adapted to low nitrogen conditions.</li> <li>• A risk assessment indicated that plants in the park were at low risk of foliar ozone injury. While the generally dry conditions in the park are likely to limit ozone uptake by plants and subsequent injury, a wet year or strong summer monsoon season may increase the risk of ozone injury.</li> </ul> <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Prescribed fire or mechanical thinning to address habitat change due to fire exclusion.</li> <li>• Nonnative plant and fish control.</li> <li>• Supplemental species transplants for Bonneville cutthroat trout, mottled sculpin, pygmy rabbit, and bighorn sheep.</li> <li>• Wetland restoration.</li> <li>• Road removal (ripping abandoned roads).</li> <li>• Partner with other agencies to achieve landscape-level management goals.</li> <li>• Improve outreach to local communities to promote education and volunteerism.</li> <li>• Continue to implement strategies developed in park’s Climate Friendly Parks Action Plan.</li> <li>• Improve connectivity between stream segments – culvert removal, etc.</li> <li>• Minor boundary adjustment to include bighorn winter range would help keep them away from domesticated sheep and prevent the spread of disease.</li> </ul> |

| Fundamental Resource or Value                                                                | Intact Great Basin Ecosystems                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
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| Existing Data and Plans Related to the FRV                                                   | <ul style="list-style-type: none"> <li>• Extensive data on wildlife and plant communities have been collected by the park.</li> <li>• Very good recent inventory of fisheries.</li> <li>• Fisheries management plan (antiquated).</li> <li>• Fire management plan (has not been well implemented).</li> <li>• Aspen management plan (brand new).</li> <li>• Vegetation management plan (brand new).</li> <li>• Nonnative plant management plan (brand new).</li> <li>• Soil survey (brand new).</li> <li>• Air pollution deposition studies and risk assessment.</li> <li>• The Nature Conservancy is working on a climate change scenario planning document, but needs to complete it and give it to park.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Data and/or GIS Needs                                                                        | <ul style="list-style-type: none"> <li>• Long-term monitoring to understand climate change impacts on native species.</li> <li>• Special studies to examine pollution dose-response relationships in sensitive park ecosystems.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Planning Needs                                                                               | <ul style="list-style-type: none"> <li>• Bighorn sheep management plan (multiagency).</li> <li>• Update fisheries management plan.</li> <li>• Update fire management plan.</li> <li>• Shrub steppe wildlife management plan—good data have already been collected, need a bit more on pygmy rabbits.</li> <li>• Turkey management plan.</li> <li>• Winter use plan.</li> <li>• Climate change response planning.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance | <p><b>Laws, Executive Orders, and Regulations That Apply to the FRV</b></p> <ul style="list-style-type: none"> <li>• National Invasive Species Act</li> <li>• Clean Water Act</li> <li>• National Environmental Policy Act</li> <li>• Endangered Species Act</li> <li>• Clean Air Act (42 USC 7401)</li> <li>• Nevada Conservation Agreement and Conservation Strategy for Bonneville cutthroat trout</li> <li>• Executive Order 13112, “Invasive Species”</li> <li>• Secretarial Order 3289 “Addressing the Impacts of Climate Change on America’s Water, Land, and Other Natural and Cultural Resources”</li> </ul> <p><b>NPS Policy-level Guidance (NPS Management Policies 2006 and Director’s Orders)</b></p> <ul style="list-style-type: none"> <li>• NPS <i>Management Policies 2006</i> (chapter 4) “Natural Resource Management”</li> <li>• NPS <i>Management Policies 2006</i> (4.6.1) “Protection of Surface Waters and Groundwaters”</li> <li>• NPS <i>Management Policies 2006</i> (4.7.1) “Air Quality”</li> <li>• NPS <i>Management Policies 2006</i> (4.7.2) “Weather and Climate”</li> <li>• NPS <i>Natural Resource Management Reference Manual 77</i></li> <li>• NPS Director’s Order 18: <i>Wildland Fire Management</i></li> <li>• NPS Reference Manual 18: <i>Wildland Fire Management</i></li> </ul> |



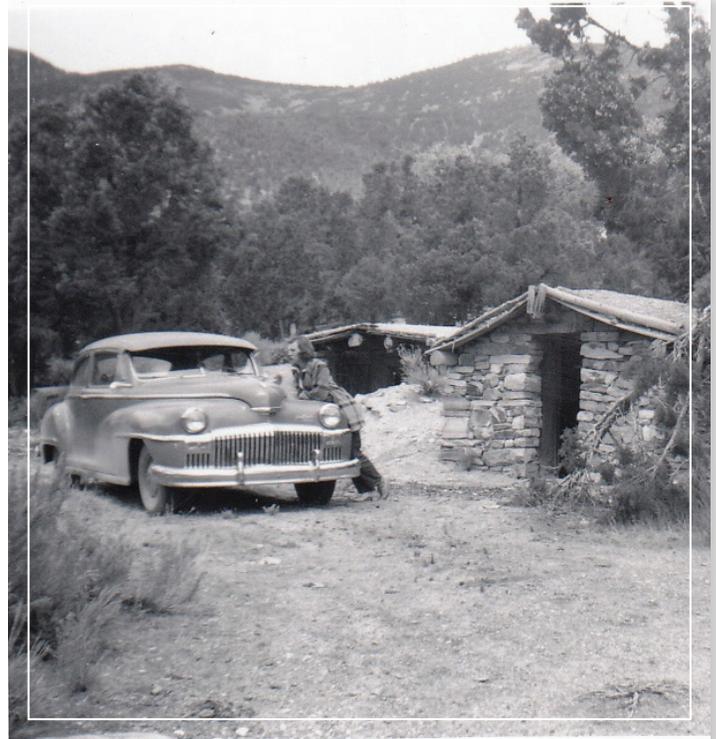
| Fundamental Resource or Value                                                                | Ancient Bristlecone Pines                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Significance Statements                                                              | Significance statements 2, 3, 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Current Conditions and Trends                                                                | <p><b>Conditions</b></p> <ul style="list-style-type: none"> <li>• Ancient groves are static, in good health, and very stable.</li> </ul> <p><b>Trends</b></p> <ul style="list-style-type: none"> <li>• Stable.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Threats and Opportunities                                                                    | <p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• The main cause of ancient bristlecone death is soil erosion. Roads and trails could impact the groves, but Mount Washington road has been there for more than 100 years with no visible impacts.</li> <li>• A large stand-replacing fire is the primary threat</li> <li>• Climate change could alter conditions for existing groves. However, because the current groves are below summits, room exists for vertical migration to higher elevations over the short term if mean annual temperature increases as projected.</li> <li>• There are potential threats from insects or disease, but none are known yet.</li> <li>• Though coring is not currently allowed in park, cores could have the potential to kill trees or introduce disease.</li> </ul> <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• None identified.</li> </ul>                                |
| Existing Data and Plans Related to the FRV                                                   | <ul style="list-style-type: none"> <li>• The Mount Washington Research Natural Area, which is accessible by vehicle, has large, fairly complete dendrochronology records. The research natural area limits park development activities, which adds another layer of protection. This area was created in the last general management plan, and should be maintained.</li> <li>• An extensive dendrochronology repository is maintained by the University of Arizona.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Data and/or GIS Needs                                                                        | <ul style="list-style-type: none"> <li>• Long-term monitoring to understand climate change impacts on native species.</li> <li>• Ongoing research on insect and disease threats—being led by others outside the park, with cooperation from the park.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Planning Needs                                                                               | <ul style="list-style-type: none"> <li>• Mount Washington Research Natural Area management plan.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance | <p><b>Laws, Executive Orders, and Regulations That Apply to the FRV</b></p> <ul style="list-style-type: none"> <li>• NRS 527.050 “Unlawful removal or destruction of trees or flora”</li> <li>• Secretarial Order 3289 “Addressing the Impacts of Climate Change on America’s Water, Land, and Other Natural and Cultural Resources”</li> <li>• National Environmental Policy Act</li> </ul> <p><b>NPS Policy-level Guidance (NPS Management Policies 2006 and Director’s Orders)</b></p> <ul style="list-style-type: none"> <li>• NPS <i>Management Policies 2006</i> (4.4.1) “General Principles for Managing Biological Resources”</li> <li>• NPS <i>Management Policies 2006</i> (4.4.2.4) “Management of Natural Landscapes”</li> <li>• NPS Director’s Order 18: <i>Wildland Fire Management</i></li> <li>• NPS <i>Natural Resource Management Reference Manual 77</i></li> <li>• NPS <i>Reference Manual 18: Wildland Fire Management</i></li> </ul> |

| Fundamental Resource or Value                                                                | Solitude                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| Related Significance Statements                                                              | Significance statement 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Current Conditions and Trends                                                                | <p><b>Conditions</b></p> <ul style="list-style-type: none"> <li>• There is limited development inside the park.</li> <li>• The mean existing sound level (with the influence of man-made sounds) is predicted to be 1.4 decibels above the natural ambient sound level (on a scale that ranges from 0 decibels to 4.9 decibels). Compared to parks throughout the national park system, this is a low number and shows a prominence of natural sounds at Great Basin National Park that should be preserved and protected.</li> <li>• Numerous high overflights account for the bulk of the sound level increase above the ambient level.</li> </ul> <p><b>Trends</b></p> <ul style="list-style-type: none"> <li>• Visitation is slowly increasing.</li> <li>• Campgrounds in Strawberry and Snake are reaching capacity more often, but still maintain opportunities for solitude.</li> </ul> |
| Threats and Opportunities                                                                    | <p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Impacts from increased visitation.</li> <li>• Impacts from increased Wheeler Peak hiking.</li> <li>• Increased use of recreational vehicles and generators produces noise.</li> <li>• Potential for mining, oil and gas extraction, and other energy development on adjacent lands could negatively impact the solitude. Specific threats could include noise, artificial light, and impacted views.</li> </ul> <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Partner with private industry to redirect some recreational vehicles outside of the park.</li> <li>• Zone campgrounds for generators.</li> </ul>                                                                                                                                                                                           |
| Existing Data and Plans Related to the FRV                                                   | <ul style="list-style-type: none"> <li>• Draft soundscape monitoring data.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Data and/or GIS Needs                                                                        | <ul style="list-style-type: none"> <li>• Visitor capacity study in campgrounds.</li> <li>• Complete soundscape monitoring.</li> <li>• Complete visual resource inventory.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Planning Needs                                                                               | <ul style="list-style-type: none"> <li>• Backcountry management plan.</li> <li>• Winter use plan.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance | <p><b>Laws, Executive Orders, and Regulations That Apply to the FRV</b></p> <ul style="list-style-type: none"> <li>• None identified.</li> </ul> <p><b>NPS Policy-level Guidance (NPS Management Policies 2006 and Director’s Orders)</b></p> <ul style="list-style-type: none"> <li>• NPS <i>Management Policies 2006</i> (chapter 8) “Use of the Parks”</li> <li>• NPS <i>Management Policies 2006</i> (4.9) “Soundscape Management” and (4.10) “Lightscape Management”</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           |

| Fundamental Resource or Value   | Scenic Views and Dark Night Skies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| Related Significance Statements | Significance statements 1, 2, 6, 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Current Conditions and Trends   | <p><b>Conditions</b></p> <ul style="list-style-type: none"> <li>• Although the park is one of the cleanest air quality areas in the country, views are sometimes obscured by pollution-caused haze. Visibility is rated a moderate concern based on NPS Air Resources Division benchmarks. Ozone concentrations from 2008–2012 are at 71.7 parts per billion, which falls within the moderate concern category.</li> <li>• Several overlooks provide opportunities to experience vistas. Current vistas range from nearly pristine to somewhat modified by the existence of roads, utilities, and development including a 66-turbine wind farm visible from some viewpoints.</li> <li>• There is little to no light pollution, one of the best conditions in the national park system.</li> <li>• The park has an anthropogenic light ratio of .05. Compared to other nonurban NPS units, this is an extremely good condition.</li> </ul> <p><b>Trends</b></p> <ul style="list-style-type: none"> <li>• The trend in visibility on the 20% clearest days improved and remained relatively unchanged on the 20% haziest days. There has been no change in the overall visibility trend.</li> <li>• Baker is actively working to reduce light pollution.</li> <li>• The park is seeking International Dark Night Sky certification, and will improve lighting fixtures in the park.</li> <li>• The park is building a new overlook (Moriah Overlook).</li> <li>• The park will probably pursue more prescribed burns, which could affect visibility.</li> <li>• The park is considering construction of an observatory.</li> <li>• Continued general development patterns, where visible, will probably add structures and utilities to existing views.</li> </ul> |
| Threats and Opportunities       | <p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• If dewatering occurs, plants will decrease while dust will increase.</li> <li>• Energy development and mining on adjacent public lands.</li> <li>• Regional and local sources of air, noise, and light pollution such as power plants, oil and gas development, industrial facilities, agriculture, and urban developments.</li> </ul> <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• The park could provide more astronomy programs.</li> <li>• A shuttle system up Wheeler Peak could reduce pollution.</li> <li>• Work with the counties to encourage a zoning plan and a lighting ordinance or guidelines.</li> <li>• Pave Baker Creek road to reduce dust.</li> <li>• There are ongoing opportunities through federal air quality programs (e.g., regional haze program), for the National Park Service to 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 outside the park.</li> <li>• There are opportunities to influence the scale and location of potential and ongoing development and other human activities through increased coordination with land management agencies and communities near the park boundaries.</li> <li>• The National Park Service intends to improve lighting fixtures in the park to help preserve the dark night sky.</li> <li>• There are ongoing opportunities through the regional haze and other air quality programs to work with state and federal air regulatory agencies and other stakeholders to address air quality impacts in parks from sources of air pollution.</li> </ul>                 |

| Fundamental Resource or Value                                                                              | Scenic Views and Dark Night Skies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <p><b>Existing Data and Plans Related to the FRV</b></p>                                                   | <ul style="list-style-type: none"> <li>• Ongoing air quality monitoring reports (the park currently monitors ambient ozone, wet and dry deposition, and visibility).</li> <li>• General management plan.</li> <li>• Night sky monitoring data.</li> <li>• Anthropogenic light ratio data.</li> <li>• Air resource conditions and data can be found at: <a href="http://www.nature.nps.gov/air/data/products/parks/index.cfm">http://www.nature.nps.gov/air/data/products/parks/index.cfm</a>.</li> </ul>                                                                                                                                                                                                                |
| <p><b>Data and/or GIS Needs</b></p>                                                                        | <ul style="list-style-type: none"> <li>• Continue monitoring of air quality and air quality related values (visibility, ozone, etc.).</li> <li>• Special studies to examine pollution dose-response relationships in sensitive park ecosystems.</li> <li>• Study whether dust from Baker Creek Road is degrading views.</li> <li>• Data needed for International Dark Night Sky certification.</li> </ul>                                                                                                                                                                                                                                                                                                               |
| <p><b>Planning Needs</b></p>                                                                               | <ul style="list-style-type: none"> <li>• Viewshed and vista management plan.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <p><b>Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance</b></p> | <p><b>Laws, Executive Orders, and Regulations That Apply to the FRV</b></p> <ul style="list-style-type: none"> <li>• Clean Air Act (42 USC 7401)</li> <li>• "Audio disturbances" (36 CFR 2.12)</li> </ul> <p><b>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</b></p> <ul style="list-style-type: none"> <li>• NPS Management Policies 2006 (4.7) "Air Resource Management"</li> <li>• NPS Management Policies 2006 (4.9) "Soundscape Management"</li> <li>• NPS Management Policies 2006 (4.10) "Lightscape Management"</li> <li>• NPS Management Policies 2006 (9.2.1) "Road Systems"</li> <li>• Director's Order 47: <i>Soundscape Preservation and Noise Management</i></li> </ul> |



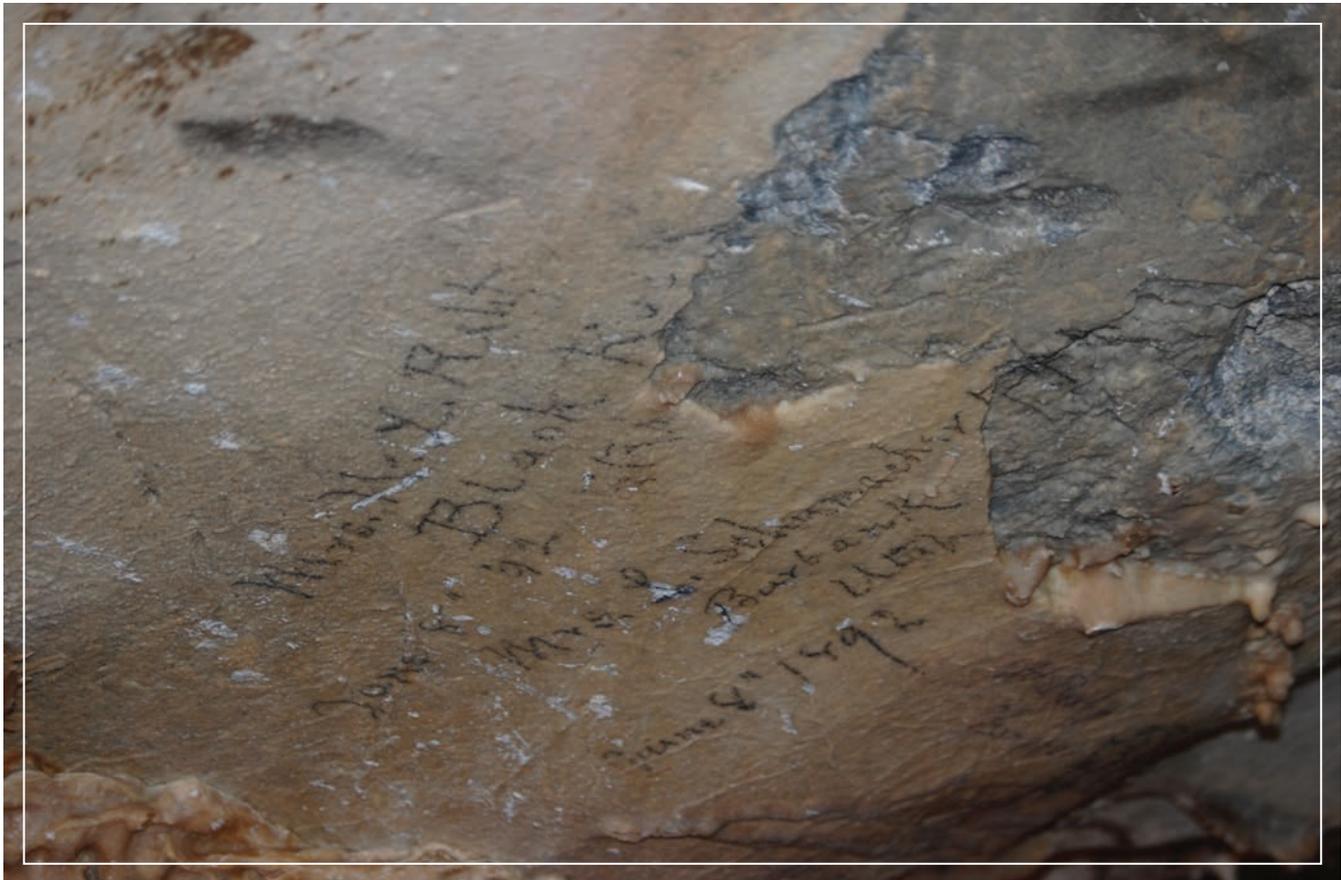


| Fundamental Resource or Value   | Representative Resources of the Great Basin's 13,000 Years of Human History                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| Related Significance Statements | Significance statements 1, 5, 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Current Conditions and Trends   | <p><b>Conditions</b></p> <ul style="list-style-type: none"> <li>• Approximately 7% to 8% of the park has been inventoried for archeological sites. Approximately 250 sites have been documented in the Archeological Sites Management Information System (ASMIS). This database contains current condition assessments for these sites; however, condition assessments and other information recorded in the database may need to be updated.</li> <li>• Five historic properties are listed in the National Register of Historic Places: Rhodes Cabin, Lehman Orchard and Aqueduct, Johnson Lake Mine Historic District, Osceola (East) Ditch, and Baker Ranger Station.</li> <li>• Overall, interpretation of the cultural resources in the park needs to be improved and updated. The Baker Visitor Center includes interpretation of the cultural resources of the Great Basin, and there is on-site interpretation of the Rhodes Cabin and Osceola ditch that needs to be updated. The park website also contains additional information on select cultural resources. Historic and cultural resources were not a focus in the interpretive themes of 2003.</li> <li>• Cultural and historic information provided in evening interpretive programs and cave tours is at the discretion of park interpretive rangers and can be inconsistent.</li> </ul> <p><b>Trends</b></p> <ul style="list-style-type: none"> <li>• Approximately 7% to 8% of the park has been inventoried for archeological sites. Archeological inventory is ongoing.</li> <li>• The majority of the park's archeological sites are deteriorating due to weathering and other natural factors that are largely beyond NPS control.</li> <li>• Visitation including inappropriate camping practices has resulted in some impacts on cultural resources (see "Threats").</li> </ul> |

| Fundamental Resource or Value               | Representative Resources of the Great Basin's 13,000 Years of Human History                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <p><b>Current Conditions and Trends</b></p> | <p><b>Trends (continued)</b></p> <ul style="list-style-type: none"> <li>Nationwide, there is a trend toward increasing heritage tourism. Visiting cultural heritage sites is becoming more popular, and this trend appears to be reflected in visitation to the park. Communities in the surrounding area have been taking advantage of this trend through the Great Basin National Heritage Area, of which the park is a major destination.</li> <li>Currently, park staff are working to update and improve the interpretation of certain cultural resources in the park through the development of waysides and other interpretive materials.</li> <li>The Rhodes Cabin and historic Lehman Orchard are current priorities for stabilization, other preservation measures, and improved interpretation.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>Threats and Opportunities</b></p>     | <p><b>Threats</b></p> <ul style="list-style-type: none"> <li>Natural factors including wildland fire and erosion threaten cultural resources. Wildland fire, in particular, is a threat to historic structures (cabins, fence posts, mine structures, etc.).</li> <li>The future impacts of a changing climate are uncertain, but climate change could potentially result in greater impacts on the park's cultural resources by altering fire regimes, contributing to increasing erosion, etc.</li> <li>Inappropriate visitor use is a threat. Unintentionally, visitors cause damage to certain resources through inappropriate practices, such as burning wooden structural material, digging holes in or nearby archeological sites, etc. Many of these impacts are associated with camping.</li> <li>At present, looting and other intentional damage does not appear to be a significant threat.</li> <li>National park units receive limited funding; project prioritization and coordination among the projects of different park divisions is a common challenge and can potentially threaten resource protection.</li> </ul> <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>Assuming adequate funding, there is an opportunity to preserve and stabilize historic structures.</li> <li>Identify resources that are high priorities for preservation measures (stabilization, etc.) and/or for interpretation.</li> <li>Implement stabilization for seven historic structures for which the park recently received funding.</li> <li>Nominate more properties for listing in the National Register of Historic Places (and to identify priorities for listing and/or research).</li> <li>Raise public awareness of the rich cultural heritage of the Great Basin. Enhance interpretation of cultural resources related to underrepresented themes. For instance, develop waysides, brochures, virtual tours, etc.</li> <li>Great Basin National Heritage Area has been collecting and organizing oral histories. This information could be integrated into park interpretation.</li> <li>Local communities are closely tied to the park and to its cultural resources. Some families have lived in the area for generations, and cultural resources within the park reflect these personal histories. Opportunity to maintain these ties and local support.</li> <li>Improve relationships and better partner with the area's native tribes. Opportunity to better and more fully tell their story through interpretation.</li> <li>Seek outside project funding (i.e., non-NPS funds) for cultural resource protection through Southern Nevada Public Land Management Act. SNMPLA funds may be used for projects that improve the quality or condition of cultural resources.</li> <li>Great Basin National Heritage Area represents an opportunity for coordinated interpretation of both cultural and natural resources for the park and Great Basin area.</li> </ul> |

| Fundamental Resource or Value                            | Representative Resources of the Great Basin's 13,000 Years of Human History                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <p><b>Existing Data and Plans Related to the FRV</b></p> | <ul style="list-style-type: none"> <li>• “Basin and Range: A History of Great Basin National Park, Historic Resource Study,” Unrau, Harlan D. (1990). (Note: park staff reports this may need to be updated to correct inaccuracies and include more up-to-date scholarship.)</li> <li>• “An Archeological Overview of Great Basin National Park,” Deal, Krista. (1988). Tucson, Arizona.</li> <li>• “Archeological Assessment of Historic Period Sites at Great Basin National Park,” Wells, Susan J. (1991). Tucson, Arizona.</li> <li>• “Archeological Investigations at Great Basin National Park: Testing and Site Recording in Support of the General Management Plan,” Wells, Susan J. (1993).</li> <li>• “Recent Archeological Investigations at Great Basin National Park,” Wells, Susan J. (1998). Tucson, Arizona.</li> <li>• National Register documentation for five properties: <ul style="list-style-type: none"> <li>• (1975). National Register of Historic Places Registration Form: Rhodes Cabin (#19).</li> <li>• (1975). National Register of Historic Places Registration Form: Lehman Orchard and Aqueduct (#22).</li> <li>• (1995). National Register of Historic Places Registration Form: Baker Ranger Station.</li> <li>• (1995). National Register of Historic Places Registration Form: Johnson Lake Mine Historic District.</li> <li>• (1996). National Register of Historic Places Registration Form: Osceola (East) Ditch.</li> </ul> </li> <li>• “Cultural Landscapes Inventory 2009, Johnson Lake Mine Historic District, Great Basin National Park,” National Park Service, Oakland, California.</li> <li>• List of Classified Structures for Great Basin National Park.</li> <li>• ASMIS database for Great Basin National Park.</li> <li>• “Great Basin National Park Museum Management Plan,” Bush, Kent, Jonathan Bayless and James O’Barr (1999). (Note: plan deals primarily with collections, which are not fundamental—i.e., not with the historic sites and properties themselves.)</li> <li>• Oral history records maintained by Great Basin National Heritage Area. (Note: relevant information may be limited and is not held by the National Park Service.)</li> </ul> |
| <p><b>Data and/or GIS Needs</b></p>                      | <ul style="list-style-type: none"> <li>• Inventory of archeological resources (ongoing).</li> <li>• Ethnographic overview and assessment.</li> <li>• HABS/HAER/HALS documentation for historic structures and landscapes.</li> <li>• National register documentation for historic and archeological resources (nominations for Baker Creek Archeological District, Bonita Mine Historic District, and other potentially eligible properties; determination of eligibility for Mission 66 structures).</li> <li>• Cultural landscape inventories for properties that have already been identified as potentials (Baker Ranger Station and Lehman Caves), and for other potentially eligible properties.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <p><b>Planning Needs</b></p>                             | <ul style="list-style-type: none"> <li>• Parkwide historic structures plan (would outline appropriate treatment and management for historic structures, perhaps by resource band).</li> <li>• Cultural resource management plan (to outline a comprehensive parkwide approach to cultural resources).</li> <li>• Long-range interpretive plan (to provide direction for interpretation of cultural resources).</li> <li>• Lehman Orchard cultural landscape report.</li> <li>• Lehman Aqueduct cultural landscape report.</li> <li>• Baker Ranger Station historic structures report / cultural landscape report.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Fundamental Resource or Value                                                                              | Representative Resources of the Great Basin's 13,000 Years of Human History                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Laws, Executive Orders, and Regulations That Apply to the FRV, and NPS Policy-level Guidance</b></p> | <p><b>Laws, Executive Orders, and Regulations That Apply to the FRV</b></p> <ul style="list-style-type: none"> <li>• "Protection of Historic Properties" (36 CFR 800)</li> <li>• National Historic Preservation Act of 1966, as amended (16 USC 470)</li> <li>• Antiquities Act of 1906</li> <li>• Archaeological Resources Protection Act of 1979</li> <li>• Archeological and Historic Preservation Act of 1974</li> <li>• Historic Sites Act of 1935</li> <li>• Native American Graves Protection and Repatriation Act</li> <li>• Secretarial Order 3289 "Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources"</li> </ul> <p><b>NPS Policy-level Guidance (NPS Management Policies 2006 and Director's Orders)</b></p> <ul style="list-style-type: none"> <li>• NPS Management Policies 2006 (chapter 5) "Cultural Resource Management"</li> <li>• <i>The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation</i></li> <li>• <i>The Secretary of the Interior's Standards for the Treatment of Historic Properties</i></li> <li>• <i>The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes</i></li> <li>• Director's Order 28: <i>Cultural Resource Management</i></li> <li>• Programmatic Agreement among the National Park Service, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers for Compliance with Section 106 of the National Historic Preservation Act (2008)</li> </ul> |



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

### Special Mandates

#### *Great Basin National Park Act of 1986*

In 1986, the Great Basin National Park Act (PL 99-565) established Great Basin National Park and included a number of mandates for management of the park.

- **Grazing Permits.** Grazing within the park shall be allowed to the extent that it was permitted as of July 1, 1985, and shall be administered by the National Park Service. The Act was amended by 16 USC § 410mm-1(f)(2) to allow the park to “acquire by donation valid existing permits and grazing leases authorizing grazing on land in the park” and then terminate those previously authorized permits and leases. This amendment has resulted in the end of grazing on park lands.
- **Fishing.** The National Park Service will “permit fishing on lands and waters under [its] jurisdiction within the park” with the exception of specifically designated areas and times where “no fishing may be permitted for reasons of public safety.”
- **Phase-Out of Mineral Lease Laws within the Park.** Lands within the park are no longer subject to “entry and appropriation” under US mining laws, the operation of US mineral leasing laws, and the operation of the Geothermal Steam Act of 1970, as amended. This withdrawal is subject to valid existing rights on park lands.
- **Water Rights.** Establishment of the park did not create any new “express or implied reservation” to the United States of any federal water or water-related right. Federal water rights for the park are limited to those that “may have been associated with the initial establishment and withdrawal of Humboldt National Forest and the Lehman Caves National Monument.”
- **Cooperative Agreements for Interpretation.** The park is authorized to enter into cooperative agreements with other federal, state, and local public departments and agencies “providing for the interpretation of the Great Basin physiographic region.” These agreements shall include the development and operation of “interpretive facilities and programs on lands and waters outside the boundaries of such park, with the concurrence of the owner or administrator thereof.”



### Administrative Commitments

| Name                                                                         | Agreement Type                    | Start Date / Expiration Date | Stakeholders                                                                                                                                                                  | Purpose                                                                                                                                                                                              | Notes        |
|------------------------------------------------------------------------------|-----------------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Great Basin National Heritage Area Partnership                               | Agreement                         | 9/24/2007 / 10/12/2021       | Includes Millard County, UT; White Pine County, NV; The Duckwater Shoshone Reservation; The Ely Shoshone Tribe; The Goshute Indian Reservation; The Kanosh Indian Reservation | To preserve the heritage of the central area of the Great Basin.                                                                                                                                     | P07AC00047   |
| Great Basin Foundation                                                       | Friends group agreement           | 6/6/2014 / 6/6/2019          | Great Basin Foundation Board, Great Basin National Park                                                                                                                       | To provide legal and policy framework for work done by Great Basin National Park Foundation in support of Great Basin National Park and to encourage innovation and creativity to meet mutual goals. | DC-2359267   |
| Department of the Interior and Department of Agriculture                     | Memorandum of understanding       | 2/27/1990 / Continual        | Department of the Interior, Department of Agriculture                                                                                                                         | For specified cross-designation of powers and authorities of law enforcement personnel of certain agencies of the Department of Interior and Department of Agriculture.                              | 9260 (NV911) |
| National Park Service and US Fish and Wildlife Service                       | Memorandum of understanding       | 7/10/1975 / Continual        | National Park Service, US Fish and Wildlife Service                                                                                                                           | Both agencies have developed recognized experience and skills and desire to exchange knowledge on mutually satisfactory terms.                                                                       |              |
| Bonneville cutthroat trout                                                   | Agreement                         | 3/16/2007 / 3/16/2017        | Nevada Department of Wildlife, US Forest Service, NPS, US Bureau of Land Management, US Fish and Wildlife                                                                     | To expedite implementation of conservation measures for the Bonneville cutthroat trout.                                                                                                              |              |
| Great Basin National Park and Bureau of Land Management radio system sharing | Memorandum of understanding       | 7/6/2006 / Continual         | Millard County, UT; Bureau of Land Management; Great Basin National Park                                                                                                      | Install radio repeater tower on King Top Peak to solve radio communication problems for both agencies.                                                                                               |              |
| Western National Park Association                                            | Cooperative association agreement | 2/7/2011 / 2/7/2016          | Western National Park Association, Great Basin National Park                                                                                                                  | To provide facilities and cooperating services to the Western National Park Association to allow them to provide support and assistance to the National Park Service.                                |              |

| Name                                                                                                       | Agreement Type                                                                         | Start Date / Expiration Date | Stakeholders                                                                                                                                                                                                                             | Purpose                                                                                                       | Notes                                        |
|------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| Agreement to grade access road to Strawberry Creek and Big Wash park areas                                 | Right-of-way                                                                           | 8/21/1998 / 8/20/2048        | Bureau of Land Management, Great Basin National Park                                                                                                                                                                                     | Right-of-way, National Park Service is responsible for upgrading and maintaining road.                        | N-61896<br>N-7762<br>2810(NV043),<br>N-61895 |
| Emergency Services (structural fire, search and rescue, emergency medical services) with White Pine County | Memorandum of understanding                                                            | 4/1/2015 / 4/1/2020          | White Pine County, NV; Great Basin National Park                                                                                                                                                                                         | Mutual aid agreement outlining procedures to provide emergency services within park.                          | Pending approval                             |
| Wildland Fire with Bureau of Land Management                                                               | Interagency agreement                                                                  | 5/21/2013 / 5/22/2018        | Great Basin National Park, Bureau of Land Management                                                                                                                                                                                     | Framework for wildland and prescribed fire operations between Great Basin and Ely-Bureau of Land Management.  |                                              |
| Concession contract                                                                                        | Concession contract                                                                    | 7/25/2011 / 7/14/2016        | Great Basin National Park, Half Year, Inc.                                                                                                                                                                                               | Concession services at Great Basin National Park - Lehman Caves Visitor Center.                               | CC-GR-BA001-11                               |
| Spring Valley Stipulation                                                                                  | Legal stipulation to withdraw water rights protest from SNWA water development project | 9/8/2006 / Continual         | Bureau of Indian Affairs, Bureau of Land Management, National Park Service, US Fish and Wildlife Service, Southern Nevada Water Authority                                                                                                | Provides for cooperative monitoring of key indicator resources to detect impacts from SNWA water withdrawals. |                                              |
| Tri-County Workshop Meeting Group                                                                          | Information group                                                                      | Continual                    | White Pine, Lincoln and Nye Counties, Bureau of Land Management, US Fish and Wildlife Service, Great Basin National Park, Department of Agriculture, Rural Development, Nevada State Parks, Nevada Wildlife, Nevada State Lands Division | Informative quarterly public workshop.                                                                        |                                              |
| White Pine Coordinated Resource Management Steering Committee                                              | Information group                                                                      | Continual                    |                                                                                                                                                                                                                                          | Informative quarterly public workshop.                                                                        |                                              |



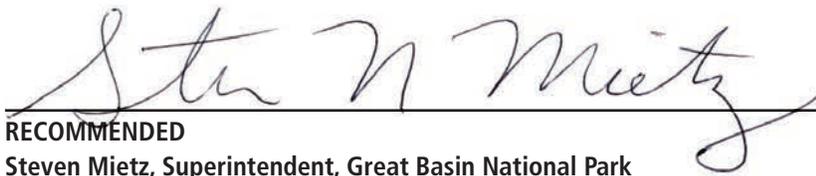
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**Pacific West Region Foundation Document Recommendation  
Great Basin National Park**

August 2015

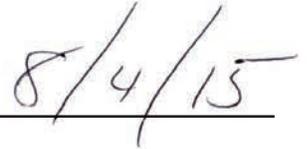
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This Foundation Document has been prepared as a collaborative effort between park and regional staff and is recommended for approval by the Pacific West Regional Director.



RECOMMENDED

Steven Mietz, Superintendent, Great Basin National Park

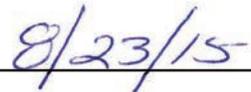


Date



APPROVED

Patricia L. Neubacher, Acting Regional Director, Pacific West 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.

GRBA 148/128167

August 2015

# Foundation Document • Great Basin National Park

