Foundation Document

June 2012



Hot Springs National Park

Arkansas



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Hot Springs National Park

Introduction

Every park needs a formal statement of its core mission to provide basic guidance for all decisions to be made regarding the park—a foundation for planning and management. Increasing emphasis on government accountability and restrained federal spending make it imperative that all park stakeholders understand the park's purpose, significance, resources and values, interpretive themes, special mandates, conditions of the fundamental resources and values, and the legal and policy requirements for administration and resource protection.

The primary advantage of developing and adopting a foundation statement is the opportunity to integrate and coordinate all kinds and levels of planning and decision making from a single, shared understanding of what is most important about the park. The legislation that created and subsequently shaped Hot Springs National Park guided the planning team in understanding and documenting why Congress and the president established the park.





Description

Hot Springs National Park is a 5,500-acre park in Hot Springs, Arkansas, that preserves geothermal spring water and resources related to therapeutic bathing and parklands that provide opportunities for public health and wellness activities. Congress created the park in 1832 when it designated the land as Hot Springs Reservation. In 1921, the reservation name was changed to Hot Springs National Park. Today, Hot Springs National Park preserves and manages its natural and cultural resources for over 1.5 million annual visitors. Located about 55 miles southwest of Little Rock, Hot Springs National Park encompasses mostly forested mountains, but includes a developed urban edge formed by Bathhouse Row, which was designated a national historic landmark in 1987.

Bathhouse Row is a 0.25-mile-long row of eight bathhouse buildings along Central Avenue. It is the most heavily visited part of the park. This area encompasses 6 acres formally landscaped with open lawns, trees, shrubs, fountains, a formal staircase entrance, a promenade in front of the bathhouses, and a Grande Promenade behind the bathhouses. The park uses one bathhouse (Fordyce) as a visitor center and museum and one for the cooperating association store, administrative offices, and curatorial storage (Lamar). While all the bathhouse buildings belong to Hot Springs National Park, three of the buildings are operated by private sector business partners through leases and concessions contracts. These commercial opportunities allow for adaptive use with compatible commercial activities. Currently on Bathhouse Row, one bathhouse operates as a contemporary art museum (Ozark), one operates as a traditional bathhouse (Buckstaff), one operates a modern day spa (Quapaw), and the remaining three (Hale, Maurice, and Superior) are vacant and are being marketed under the National Park Service



Hot Springs National Park

(NPS) Leasing Program. The park administration building at the south end of Bathhouse Row also houses the water distribution system. A ninth bathhouse (Libbey Memorial Physical Medicine Center) was established in 1922 as a free bathhouse for indigent people. It is set apart from Bathhouse Row and is currently vacant and also being offered for adaptive reuse.

Hot Springs National Park collects and distributes thermal water to the bathhouses and public fountains, and to a nonprofit hospital and three hotels outside the park. The park uses an extensive underground collection system that is largely concealed from public view. Although most of the 47 springs on the mountainside are capped to prevent contamination, the public can interact with the spring water by bathing in the bathhouses, viewing several display springs, or by collecting it as drinking water from one of the park's public fountains. Thousands of people come to the park to fill jugs or bottles from the outdoor jug fountains that provide the water free to the public.

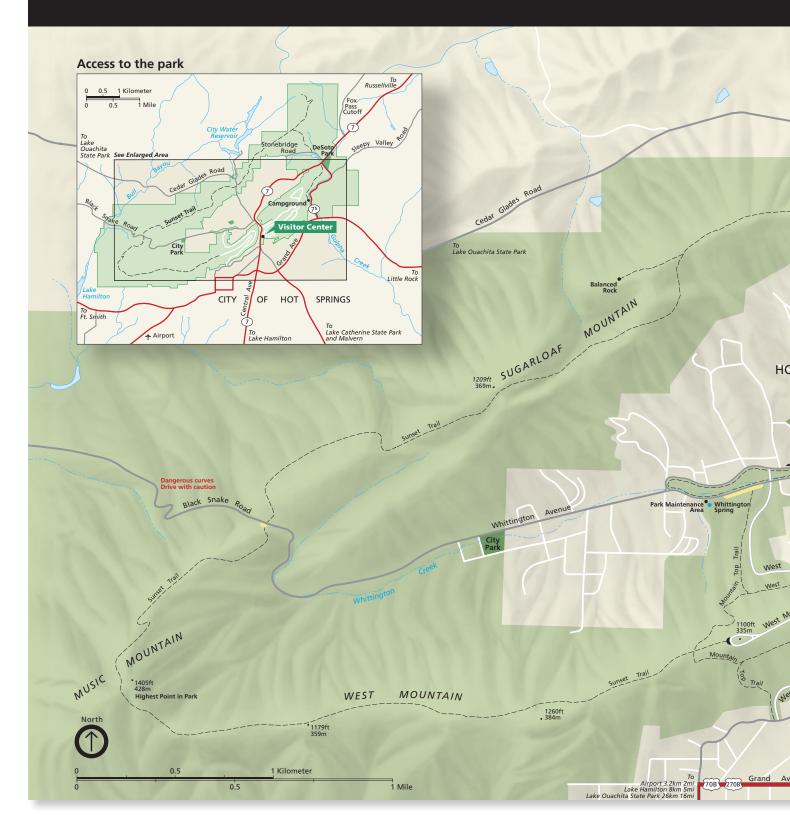
The low-lying mountain areas of the park help protect the hot springs, which are a vital part of the park's function to offer uncontaminated thermal water to the public. When rainwater seeps into fractures in the highly permeable Bigfork Chert formation and Arkansas Novaculite formation of the mountains, the water filters down deep into the earth. The geothermal gradient causes the surrounding rock to heat at a predictable rate with increased depth. As the water travels to extreme depth, it is heated by conduction to approximately 160 degrees Fahrenheit, causing minerals to dissolve into the water. The water then rises to the surface through the faults and joints leading up to the base of Hot Springs Mountain, where the hot mineral water is passively collected. The area where the mountains absorb the rainwater that feeds the hot springs, also called the "recharge zone," is understood to be partly within the park boundary. Recent studies show that a sizable portion of the recharge zone is found outside the boundary, east of the park. An ongoing research and monitoring project will help determine the location of this recharge area. The climate change projected for the Hot Springs National Park region could influence both discharge and temperature of the park's hot springs (see appendix C for a more comprehensive discussion of climate change).

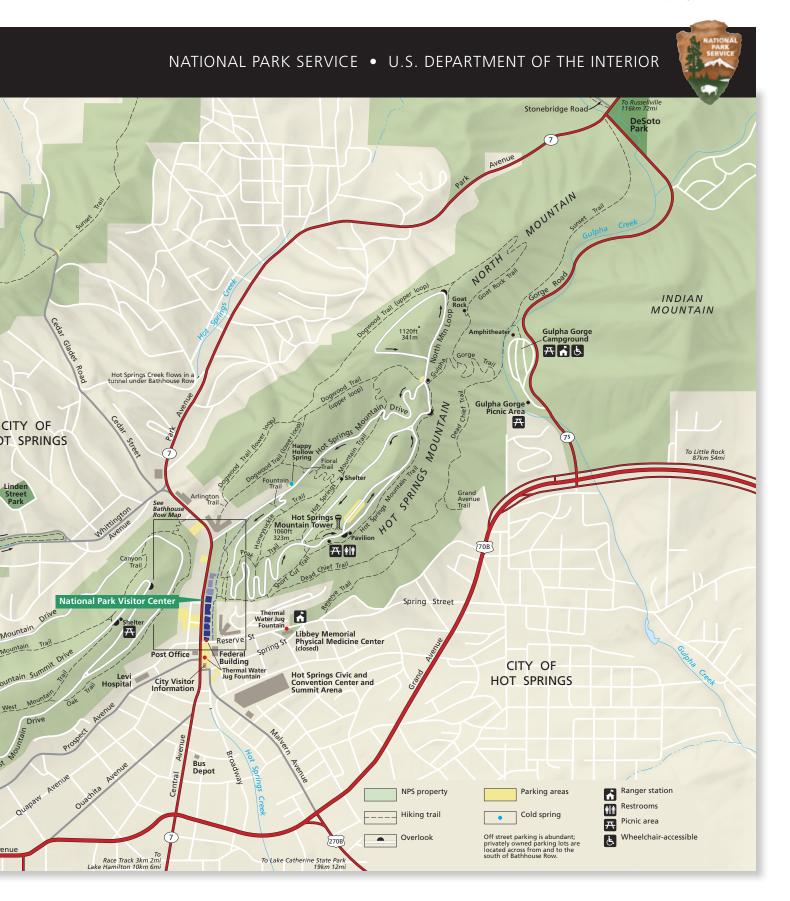


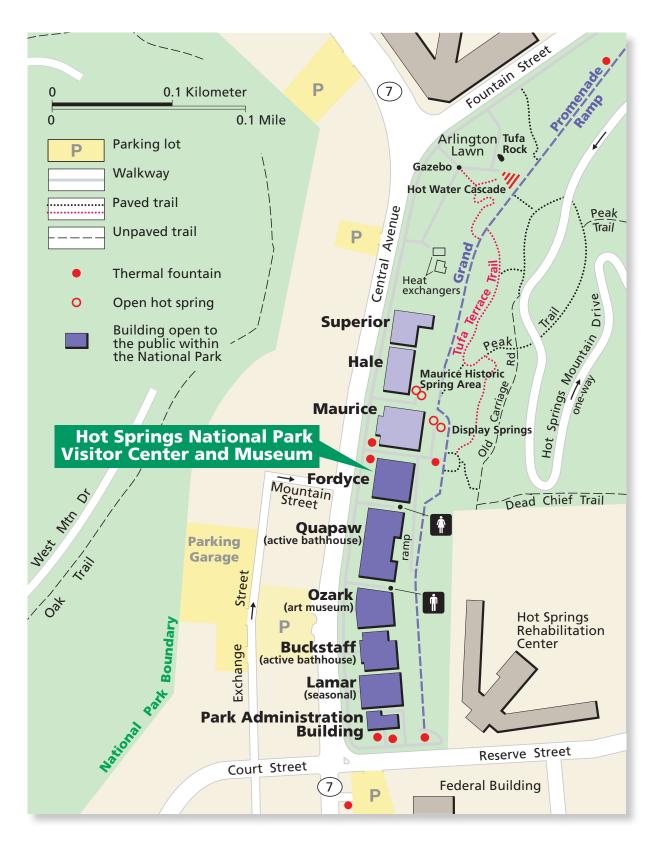




HOT SPRINGS NATIONAL PARK • ARKANSAS











Purpose

The park purpose is the specific reason for establishing a particular park. Park purpose statements are grounded in a thorough analysis of park legislation (or executive order) and legislative history, including studies prior to authorization that go beyond a restatement of the law and what the law means in terms specific to the park.

The purpose of Hot Springs National Park is to protect its unique geothermal spring water and associated lands for public health, wellness, and enjoyment.

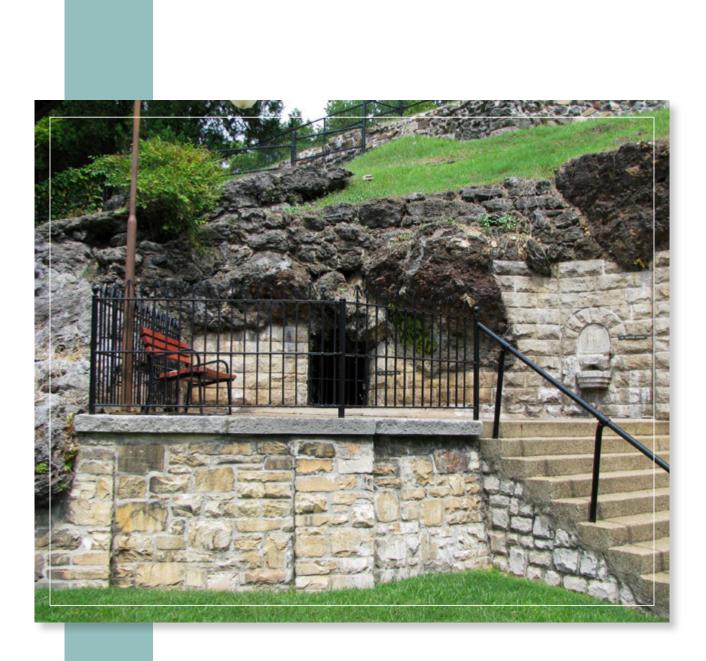


Significance Statements

Park significance statements express why park resources and values are important enough to warrant national park designation. Statements of park significance describe why an area is important within a global, national, regional, and systemwide context. These statements are directly linked to the purpose of the park and are substantiated by data or consensus. They reflect the most current scientific or scholarly inquiry and cultural perceptions, which may have changed since establishment of the park.

- 1. Hot Springs National Park is the only national park that protects a unique combination of lithology, geologic structure, and water sources that produce the only nonvolcanic geothermal springs of such high quality (temperature, taste, color, odorless) in the United States.
- 2. Hot Springs National Park is the only national park in the United States established to promote a holistic approach to health by ensuring public access to geothermal water, the surrounding natural environment, and other public recreational landscapes.
- 3. Hot Springs National Park offers unparalleled opportunities for research of a geothermal hydrologic system that has been geologically stable for 200 million years such as the study of the recently discovered globally unique thermophilic life forms and other yet-to-be-discovered resources.
- 4. The Bathhouse Row National Historic Landmark, which contains the largest collection of early 20th century bathhouses in the United States and the Grand Promenade, showcases the evolving approach to the architectural and landscape design of spa resorts.
- 5. The thermal springs in Hot Springs National Park were the first, and continue to be, the only federally controlled hot springs in the United States to be managed for both public health and consumptive use. Hot Springs National Park is the only unit of the national park system that is mandated to give away its primary natural resource to the general public in an unending and unaltered state.





Interpretive Themes

Interpretive themes are those ideas or concepts about Hot Springs National Park that are key to helping visitors gain an understanding of park significance and resources. The themes, which are based on park purpose and significance, provide the foundation for interpretive programs and media in the park. The themes do not include everything that may be interpreted, but they do address the ideas that are critical to visitor understanding and appreciation of the park's significance. Effective interpretation is achieved when visitors are able to associate resources and their values and consequently derive something meaningful from their experiences.

- 1. While Hot Springs National Park protects the quality of the geothermal spring water, it is up to us all to preserve the quantity of the water.
- 2. The thermal water and experiences in the natural environment that originally drew people to the area continue to be key elements to a holistic approach to life, health, and wellness.
- 3. For over 200 years, the mystery of these hot springs has lured people to conduct research and make scientific discoveries that provide a greater understanding of the geothermal system. This fascination with the spring water may also inspire future scientific breakthroughs.
- 4. The impressive cultural landscape of Bathhouse Row evokes the continuum of the American spa experience through history, anchored in the methods and beliefs of the past, yet ever-evolving to meet the needs of modern times.
- 5. The perceived healing value of the geothermal spring water prompted the U.S. government to take unprecedented action that ultimately provided equal access to the water for everyone.







Hot Springs National Park

Fundamental Resources and Values

Fundamental resources and values are closely related to the designated purpose of the park and warrant primary consideration in planning and management because they are critical to achieving park purpose and maintaining its significance. If these resources are allowed to deteriorate, the purpose and/ or significance of the park could be jeopardized. A loss of major impact to a fundamental resource or value could constitute impairment, violating the 1916 NPS Organic Act.

The fundamental resources and values of Hot Springs National Park are:

- thermal water and all components
- water collection and distribution system
- public interaction with geothermal water and the natural environment for the promotion of holistic human health
- cultural landscape, including Bathhouse Row National Historic Landmark
- museum collection

Other Important Resources and Values

Hot Springs National Park has other important resources and values that are secondary to park purpose and significance, but are still important resources to protect and address in planning actions.

Other Natural Resources:

- Rare plant resources:
 - > imperiled chestnut species, Ozark chinquapin, Castanea ozarkensis
 - > Graves' speenwort, Asplenium gravesii
 - > Missouri bladderpod, Lesquerella filiformis
 - > old-growth forest
 - > champion cherry tree
- · Cold water springs
- Balanced Rock
- Goat Rock

Other Cultural Resources

- Hot Springs Creek Arch
- Archeological sites (e.g., Novaculite quarries, cemeteries)
- Hot Springs Mountain Tower
- Structures in the community associated with the American Spa Movement
- Fordyce-Ricks Estate (private inholding)
- 50+/- other historic structures in park

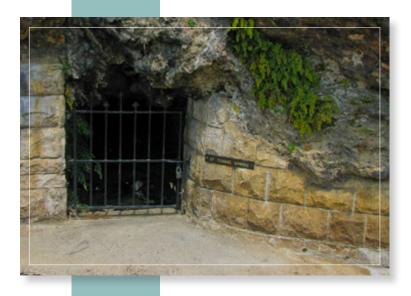


Analysis of Fundamental Resources and Values

The analysis of fundamental resources articulates the importance of each fundamental resource and value, current condition, potential threats, and the related issues that require consideration in planning and management. Included in the analysis is the identification of relevant laws and NPS policies specific to the preservation and management of the resources at Hot Springs National Park.

All activities conducted in national parks are grounded in NPS *Management Policies 2006* and a variety of NPS director's orders. An extensive list of cultural resource laws can be found in the scope of collections, cultural landscape report (CLR), and cultural landscape inventory for the park. The laws and policies that are mandated for all parks are not listed separately in the tables that follow.

This section of the foundation statement will require periodic reviews and updates as monitoring and research improves our understanding of each fundamental resource and value.





Components	47 thermal springs.
	Recharge zone components:
	> Permeability, porosity, and hydraulics of the recharge zone.
	> Surface area and depth of the recharge zone.
	 The vegetation of the natural landscapes plays a critical role in filtering water as it seeps
	into the ground to feed thermal springs.
	 Outstanding water quality, ph7.
	Thermophilic organisms.
	Vapors.
	Isolated, evolutionary environment for microscopic life forms.
	 Three rock units are involved in the creation of the thermal water.
Importance	• The thermal water is the reason for the existence of Hot Springs National Park (enabling legislation).
	The National Park Service is required to provide water in an unaltered and unending state.Recharge zone is sole source of the geothermal springs.
Current Conditions,	 Current research now supports the idea that the bulk of the thermal water recharge is outside the Hot Springs National Park boundary.
Trends, and Threats	 Currently, the springs are uniform in regard to discharge, water quality, and temperature. Thermal spring discharge includes a small but important shallow component of cold-water recharge.
	• Approximate discharge is 700,000 gallons in a 24-hour period.
	Current use is sustainable at this point and time.
	Hot Springs National Park is changing thermal water-use patterns seasonally for heat. There is
	a marked increase in usage.
	Threats:
	 Non-NPS-controlled development could lead to some degree of diminished water quantity. Drought conditions will immediately affect the discharge.
	 Climate change models project an increase in air temperature +2.6°C to +4.4°C and decrease in precipitation 2% to 8%, between 1990 and 2100.
	Encroachment could occur due to lack of a parkwide boundary survey.
Desired	Clean, high-quality thermal water is available.
Conditions	• The recharge zone continues to serve as the source for plentiful, clean high-quality thermal
(within law	springs, unimpeded by incompatible uses of the surface area.
and policy)	Official park boundary is surveyed and marked.
Park Specific	4 Stat. 505 (1832), Hot Springs Reservation set aside.
Law and Policy	• 20 Stat. 258 (1878), Leasing of bathhouses, free baths for the indigent, and Hot Springs
Guidance	Mountain and spring field set aside as "permanent reservation."
	 Various statutes describing minor boundary adjustments. 26 Stat. 842 (1891), Rules and regulations to be established regarding use of thermal water
	• 26 Stat. 842 (1891), Rules and regulations to be established regarding use of thermal water

Fundamental Resource or Value: Water Collection and Distribution System		
Components	 Collection reservoir. Multiple distribution reservoirs. Cooling station. Collection and distribution plumbing. Jug fountains for public water collection. Display features. 	
Importance	 System allows for the ability to control discharge for consumption and public health. System allows for continuous service. System allows for visual display and provides for visitor interaction. 	
Current Conditions, Trends, and Threats	 System capacity is over 800,000 gallons. Age of system components range from 25 to 60 years. Threats: System is at various stages of deterioration. 	
	 System is at valious stages of deterioration. Increased use of thermal water for heating places increased demand on system. Control systems are obsolete. System is vulnerable to criminal or terrorist activities. 	
Desired Conditions (within law and policy)	 Funding to operate and maintain the system is adequate. Technology control systems are current. Obsolete and deteriorated components (piping, pumps, heat exchanger, etc.) are replaced. Collection and distribution system is secured to prevent criminal activity. 	
Park Specific Law and Policy Guidance	 4 Stat. 505 (1832), Hot Springs Reservation set aside. 20 Stat. 258 (1878), Leasing the bathhouses and free baths for the indigent. 22 Stat. 121 (1883), Army-Navy Hospital established. 24 Stat. 647 (1887), Supply water to bathhouses off the reservation. 25 Stat. 619 (1888), Supply surplus water outside the reservation. 26 Stat. 842 (1891), Leasing bathhouses, providing surplus water to buildings outside the permanent reservation, and water collection. 36 Stat. 1015 (1911), Free baths for the indigent. 37 Stat. 322 (1912), Levi Hospital to lease water for drinking and bathing. Safe Drinking Water Act (1974). Arkansas State Board of Health Rules and Regulations Pertaining to Public Water Systems. 	



Fundamental Resource or Value: Public interaction with geothermal water and the natural environment for the promotion of holistic human health		
Components	 Bathhouse Row. Libbey Memorial Physical Medical Center. Collection points (public fountains, jug fountains, cascade, springs). Oertel trail system. 26 miles of hiking and horseback riding trails. 8.5 miles of scenic mountain roads. Gulpha Gorge Campground. 2 picnic areas. 	
Importance	 Public interaction with water and natural environment allows people to restore emotional, physical, and mental balance in a park setting. Public interaction with water in the park ensures access to natural environment. Oertel trail system was designed by physicians and prescribed to patients to build cardio-pulmonary health and fitness as part of the spa experience, and was one of only two known systems in the United States. Libbey Memorial Physical Medical Center was established as a free government bathhouse for the indigent. Public interaction with thermal water is good for health, and conveys the identity of the park. Collection of thermal water is a value not determined by the National Park Service, but by the visitor. Important health benefits of the natural environment of the park is linked with the health benefits of the spas and creates an opportunity for holistic human health. The natural landscapes offer visitors a place to exercise in pursuit of holistic health, enhancing the spa experience. <i>(table continued on to next page)</i> 	



Fundamental Resource or Value: Public interaction with geothermal water and the natural environment for the promotion of holistic human health (continued from previous page)		
Current Conditions, Trends, and Threats	 26 miles of trails are in good condition. 8.5 miles of roads are in good condition. Gulpha Gorge Campground and two park picnic areas are in good condition. Multiple display features (fountains, cascade, springs) are in good condition. Bathhouse Row is in good condition. The Buckstaff and Quapaw bathhouses are the only public bathing facilities remaining in the park. Remnants of the Oertel trail system exist in the form of newer trail and road systems. Some trail markers exist, and maps are available in park archive collection showing where the four trails were located. Other recreational opportunities are explored as options to promote holistic health in a natural environment. Threats: Park does not own approximately 900 feet of the Oertel trail system. The Libbey Memorial Physical Medical Center; Superior, Hale, and Maurice bathhouses are vacant due to lack of public funds. All are available for lease to the private sector. The lack of an ethnography study means that activities could inadvertently impact yet-to-beidentified ethnographic resources. Interactions are negatively impacted by criminal activity, most notably disorderly behavior, assaults, drug and alcohol violations including public intoxication and DUIs, thefts, vandalism, littering, etc. Condition of Bathhouse Row is threatened by cumulative impacts, over time, of visitor use, erosion, and weathering, which have been difficult to mitigate given both continued use and funding challenges. Aggressive nonnative species threaten the integrity of old-growth stands and other upland forest communities. Sections of some trails are on park roads. 	
Desired Conditions (within law and policy)	 As determined in a trails development plan, sections of trails are rerouted to keep visitors off roads and other recreational opportunities are explored as options to promote holistic health in a natural environment. Use of Oertel trail system is restored and encouraged, in partnership with local and regional medical community. All bathhouses are open to the public for appropriate use within a national park. Maintain public access to water using guidance of an ethnographic study. Maintain Bathhouse Row in good condition and according to the treatment recommendations in the 2010 Cultural Landscape Report. Natural environment and ecosystems are maintained. Invasive species are eradicated that threaten the upland forest communities resulting in restoration of native vegetative communities. 	



	Resource or Value: Public interaction with geothermal water and the natural environment tion of holistic human health (continued from previous page)
Park Specific Law and Policy Guidance	 4 Stat. 505 (1832), Hot Springs Reservation set aside. 20 Stat. 258 (1878), Leasing bathhouses and free baths for the indigent. 21 Stat. 288 (1880), Mountainous districts (North, West, and Sugar Loaf mountains) are for public use as parks and join Hot Springs Mountain as the "permanent reservation." 22 Stat. 121 (1883), Army-Navy Hospital established. 24 Stat. 647 (1887), Supply water to bathhouses off the reservation. 25 Stat. 619 (1888), Supply surplus water outside the reservation. 26 Stat. 842 (1891), Leasing bathhouses and providing surplus water to buildings outside the permanent reservation. 36 Stat. 1015 (1911), Indigents allowed free baths at the free bathhouse after making an oath. 37 Stat. 322 (1912), Levi Hospital to lease water for drinking and bathing. 41 Stat. 918 (1920/amended 1931), Government to assess and collect fees from physicians, bath attendants, and masseurs. 43 Stat. 423 (1924), Gulpha Gorge Campground added to the park. 46 Stat. 1109 (1931), Former Arlington Hotel site to be kept for park and landscaping purposes. 50 Stat. 243 (1937), Exclusive jurisdiction over all lands now or hereafter included within Hot Springs National Park. Bathhouse Row National Historic Landmark designation (1987). Hot Springs National Park Fire Management Plan (2005). Charter of the Heartland Inventory and Monitoring Network (2007). Hot Springs National Park Long-range Interpretive Plan (2009). Arkansas Fire Management Group Agreement (2010). Hot Springs National Park Cultural Landscape Report/Environmental Assessment (2010). Hot Springs National Park Cultural Landscape Inventory (2011).



Fundamental F Landmark	Resource or Value: Cultural Landscape, including the Bathhouse Row National Historic
Components	 Bathhouse Row. Grand Promenade and Mountain Sidegrounds. Formal Entrance (Stevens Balustrade). Arlington Lawn. Hot Springs, North, and West Mountain roads, overlooks, and trailheads. Whittington Park. Gulpha Gorge Campground. Fordyce-Ricks Historic District.
Importance	 Cultural landscape conveys the identity of the park and ties together important elements of the spa experience and the national park identity. Bathhouse Row and the Grand Promenade provide an avenue to promote the holistic uses of waters and surrounding area. Cultural landscape is an example of the level at which a spa can be developed. Cultural landscape represents the willingness of the federal government to invest in public health. As a functioning spa, the bathhouses and other elements of the cultural landscape provide an experience similar to that of historic spa visitors. Cultural landscape is a good example of the degree in which the federal government interacted with entrepreneurial spirit and thrust to achieve a specific goal.
Current Conditions, Trends, and Threats	 Cultural landscape condition is generally good. Threats: Notable exceptions of the condition of the cultural landscapes are due to the cumulative impacts, over time, of visitor use, erosion, and weathering, which have been difficult to mitigate given both continued use and funding challenges. Landscape is negatively impacted by criminal activity, most notably theft, vandalism, littering, etc.
Desired Conditions (within law and policy)	• Maintain cultural landscapes in good condition and according to the treatment recommendations in the 2010 Cultural Landscape Report/Environmental Assessment.
Park Specific Law and Policy Guidance	 20 Stat. 258 (1878), Hot Springs Mountain and spring field set aside as "permanent reservation." 21 Stat. 288 (1880), Mountain districts (North, West, and Sugar Loaf) are for public use as parks and join Hot Springs Mountain as the "permanent reservation." 43 Stat. 423 (1924), Gulpha Gorge Campground donation is accepted by the government. 46 Stat. 1109 (1931), Former Arlington Hotel site to be kept for park and landscaping purposes. Bathhouse Row National Historic Landmark designation (1987). Hot Springs National Park Cultural Landscape Report/Environmental Assessment (2010). Hot Springs National Park Cultural Landscape Inventory (2011).

Fundamental Resource or Value: Museum Collections		
Components	 Historic objects, including medical tools and fixtures. Insects. Plants. Geological specimens 	
Importance	 Collections on the Golden Age of bathing. Collections on federal government involvement in promoting public health. Collection chronicles story of visitors and park employees, bath attendants and managers, American Indians, key individuals associated with the creation of the bath houses and park creation. Collections of insects, plants, and geological specimens important to park's natural history. 	
Current Conditions, Trends, and Threats	 Fair to good. Accessioning and cataloging are not complete. Environmental conditions (mainly temperature and relative humidity) are not optimal for proper preservation of museum collections. 	
Desired Conditions (within law and policy)	 All items are catalogued and properly stored. Accessions are done as items are added. Collection is well organized and available in a more searchable form so as to encourage more access by researchers and staff to add to the body of knowledge we now have. 	
Park Specific Law and Policy Guidance	 Hot Springs National Park Collection Management Plan (1993). Midwest Region Collection Storage Plan (2006). NPS Park Museum Collection Storage Plan (2008). Hot Springs National Park Scope of Collection Statement (2011). 	





Special Mandates and Administrative Commitments

These are legal requirements and administrative commitments that apply to the park. They are mandated by Congress or by signed agreements with other entities. They are specific to the park and are not an inventory of all the laws applicable to the national park system.

Special Mandates

Since 1832, there have been a total of 67 public laws specific to Hot Springs National Park. Many are in reference to boundary changes, land use, and jurisdiction.

Hot Springs National Park is the only unit of the national park system that is mandated to give away its primary natural resource in an unending and unaltered state, as included in United States Code (USC) 361: Title 16, Chapter 1, Subchapter XL (see appendix B for an excerpt of this legislative mandate).

Administrative Commitments

Fire Support:

- Hot Springs Fire Department
- Morning Star Volunteer Fire Department
- Piney Volunteer Fire Department
- Arkansas Forestry Commission
- Arkansas National Parks/FMO

Law Enforcement Support:

- Hot Springs Police Department
- Garland County Sheriff's Office

U.S. Geological Survey:

- Flood Warning System
- Thermal Water Monitoring
- Multiple Thermal Water Research Projects

Fundraising:

• Friends of the Fordyce and Hot Springs National Park

Cooperating Association:

• Eastern National

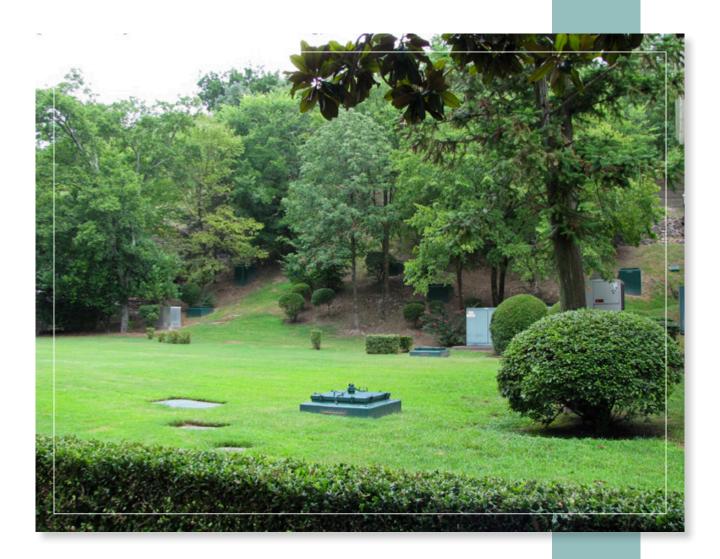
Concessions Contracts:

• Hot Springs Advertising and Promotion Commission - Mountain Tower

• The Buckstaff Bath House Company – Buckstaff Bathhouse

Lease Agreements:

- U.S. Forest Service Medical Directors Residence
- Quapaw Baths and Spa Quapaw Bathhouse
- Museum of Contemporary Art Ozark Bathhouse
- The Muses Creative Artistry Project Hale Bathhouse (intent to negotiate has been issued)
- Vapor Valley Spirits, Inc. Superior Bathhouse (intent to negotiate has been issued)



APPENDIX A: Legislation

The park's entire legislative record is quite lengthy because it includes many boundary changes and other items that, while important, are not listed as park-specific law regarding the analysis of fundamental resources and values. The following list contains a brief synopsis of the legislation that pertains to this foundation document. The actual legislation follows on pages 27–34.

- 4 Stat. 505 (1832), Hot Springs Reservation set aside
- 19 Stat. 377 [sec 4] (1877), Hot Springs Mountain and spring field set aside as "permanent reservation"
- 20 Stat. 258 (1878), Leasing of Arlington Hotel and bathhouses, free baths for the indigent, and supply water off reservation (USC Title 16, sec 361)
- 21 Stat. 288 [sec.3] (1880), Mountain districts (North, West, and Sugar Loaf) are for public use as parks and join Hot Springs Mountain as the "permanent reservation"
- 24 Stat. 647 (1887), Continue to supply water for drinking and bathing to bathhouses off the reservation
- 26 Stat. 842 [sec. 1, 3, 6] (1891), Leasing bathhouses, providing surplus water to bathhouses, hotels, and families outside the reservation; rules and regulations may be made regarding use of water and to prevent waste and water collection/distribution system (USC Title 16, sec 362, 363 & 366)
- 37 Stat. 322 [sec. 2] (1912), Levi Hospital to lease water for drinking and bathing
- 41 Stat. 1407 (1921), Reservation name changed to Hot Springs National Park (USC 16, sec 2 & 361)
- 46 Stat. 1109 (1931), Former Arlington Hotel site to be kept for park and landscaping purposes (USC, 6th supp, Title 16, sec 370a)
- 46 Stat. 1462 (1931)/amended 41 Stat. 918 (1920), Government to assess and collect fees from physicians, bath attendants, and masseurs (USC 16, sec 369)
- 50 Stat. 243 (1937), Exclusive jurisdiction over all lands now or hereafter included within Hot Springs National Park



Hot Springs Reservation set aside - April 20, 1832 (4 Stat. 505)

CHAP. LXX.—An Act authorizing the governor of the territory of Arkansas to lease the sail springs, in said territory, and for other purposes. [Obsolete.]

Bc it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That the salt springs lying on the Washita river, on Little river, and on Saline creek, in said territory of Arkansas, together with as many contiguous sections to each of said springs as shall be equal to one township, and every other salt spring which may be discovered in said territory, with the section of one mile square which includes it, shall be reserved for the future disposal of the United States, and shall not be liable to be entered, located, or appro-

priated, for any other purpose whatever. SEC. 2. And be it further enacted, That the governor of said territory shall be, and is hereby, authorized to let out or lease said springs, for a term not exceeding five years; and the rents and profits arising from said springs shall be applied, by the legislature of said territory, to the opening and improving such roads in said territory, as said legislature may direct, and to no other purpose whatever. Snc. 3. And be it further enacted, That the hot springs in said terri-

tory, together with four sections of land including said springs, as near the centre thereof as may be, shall be reserved for the future disposal of the United States, and shall not be entered, located, or appropriated, for any other purpose whatever.

AFPROVED, April 20, 1832.

March 3, 1877 (19 Stat. 377) - continued

same is hereby, repealed : Provided, That nothing in this section shall be construed to affect the right of the United Right reserved.

section shall be construed to affect the right of the United Rights reserves States to collect and receive rents already due. SEC. 2. That it shall be the duty of the President of the United States upon the passage of this act, to appoint three discreet, competent, and disinterested persons, who shall constitute a board of commissioners, any two of Commissioners whom shall constitute a quorum, who are hereby authors brings lister-ized to perform and discharge the duties specified by this without act, and for that purpose shall meet at Hot Springs, in the State of Arkansas, within thirty days after their appointment, and shall, before entering upon the dis-charge of their duties, subscribe to the usual oath for civil officers, and shall, at their first meeting, organize by the election of one of their number as chairman of the board, having given ten days' notice of the time and place of meeting in some daily paper published at Hot

the board, having given ten days' notice of the time and place of meeting in some duily paper published at Hot Springs, which notice shall be continued during the entire session of said board of commissioners, and all the evidence herein provided to be taken by said board shall be taken at Hot Springs. Szc. 3. That it shall be the duty of said commissioners, Manner et hying after examination of the topography of the reservation, we reservation to lay out into convenient squares, blocks, lots, avenues, streets, and alleys, the lines of which shall correspond with the existing boundary lines of occupants of said reservation as near as may be consistent with the inter-ests of the United States, the following-described lands, to-wit: The south half of section twenty-eight, the south half of section twenty-eight, the south thalf of section twenty-two and iscued. thirty-three, in township two south and range nineteen

to wit: The south half of section twenty-eight, the south land to be half of section twenty-nine, all of sections thirty-two and inded. thirty-three, in township two south and range nineteen west; and the north half of section four, the north half of section five, in township three south and range nine-teen west, situate in the county of Garland, and State of Arkansas, and known as the Hot Springs Reservation. Src. 4. That before making any subdivision of said lands, as described in the preceding section, it shall be hat eprizes to be the duty of said board of commissioners, under the direc-tion and subject to the approval of the Secretary of the Interior, to designate a tract of land included in one boundary, sufficient in extent to include, and which shall include all the hot or warm springs situate on the lands aforesaid, to embrace, as near as may be, what is known as Hot Springs Mountain, and the same is hereby re-served from sale, and shall remain under the charge of a superintendent, to be appointed by the Secretary of Superintendent. the Interior: *Provided, housever*, That nothing in this Superintendent. the Interior: Provided, housever, and not superintendent. Section shall preven the Secretary of the Interior from Term system. fixing a special tax on water taken from said springs. sufficient to pay for the protection and necessary improvesufficient to pay for the protection and necessary improve-

ment of the same. SEC. 5. That it shall be the duty of said commissioners Duty of com-to show by metes and bounds on the map herein provided minute.

Salt springs, &c. reserved from sale.

Governor authorized to

lease.





December 16, 1878 (20 Stat. 258)

An Act To correct an error of enrollment in bill making appropria-tions for sundry civil expenses of the Government for the fiscal year ending June thirtieth, eighteen hundred and seventy-nine, and for other purposes, approved December 16, 1876 (20 Stat. 258)

Be it enacted by the Senate and House of Representa-tives of the United States of America in Congress assem-bled, That the sum of twenty-seven thousand five hunblad, That the sum of twenty-seven thousand five hun-dred dollars, or so much thereof as may be necessary, is hereby appropriated to pay for clerk hire, engineering, marshal's fees, salaries, and other expenses of the Hot met grange Springs Commission; and the President of the United Commission. States be, and he is hereby, authorized to appoint with Appolatement. the advice and consent of the Senate, three discret, com-petent, and disinterested persons, who shall constitute a board of commissioners, any two of whom shall constitute a board of commissioners, any two of whom shall consti-tute a quorum, who shall hold their offices for the period Term et effect of one year from the date of their appointment, and shall have the same powers and authority in all respects as was provided for the commissioners appointed under the act of Congress approved March third, eighteen hundred and seventy-seven, entitled "An act in relation to the set are pitt. Hot Springs reservation in the State of Arkansas"; which act is hereby revived and continued in full force for the purpose of enabling said board of commissioners to take possession of all records, papers, and proofs, and to determine the elevine purpose to the hered of even to take possession of all records, papers, and proofs, and to determine the claims presented to the board of commissioners appointed under said act, whose term of office has expired, and to do and perform all other acts and duties authorized by said act. And the Secretary of the Interior is hereby directed to lease to the present pro-prietors of the Arlington Hotel or their assigns the arlington Hotel grounds. for a period of ten years, unless otherwise provided by them, for a period of ten years, unless otherwise provided by law, at an annual rental of one thousand dollars. And he is further directed to lease the bathhouses of a per-manent nature now upon the Hot Springs Reservation to Bathhe the owners of the same, and lease to any person or persons upon such terms as may be agreed on, sites for the building of other bathhouses for the term of five years, unless otherwise provided by law, under such rules and

December 16, 1878 (20 Stat. 258) - continued

Tax



regulations as he may prescribe; and the tax imposed shall not exceed fifteen dollars per tub per annum, in-cluding land rent: *Provided*, That said leases shall in no way prejudice any legal right that any person or persons may have acquired under the act hereby revived and con-tinued, to any improvements on said ground: *And pro-*to bab vided further, That to prevent monopoly, no bathhouse ded by as or hotel shall be supplied with more than enough water for forty bathtubs of the usual size, unless there shall be more than enough hot water to supply all other demands for the same, in which case no single establishment shall be allowed more than forty bathtubs of the usual size; *And provided further*, That the superintendent shall be defrayed out of the rentals hereinbefore provided for. In cases where fractions of lots are made by straighten-ing, widening or laying out streets, the commissioners shall have power to determine the disposal of the same, giving the preference to the owners of abutting lots: *Provided*, That all titles given or to be given by the United States shall explicitly exclude the right to the purchaser of the land, his heirs or assigns, from ever boring thereon for hot water; and the Hot Springs, with the reservation and mountain are hereby dedicated to the United States, and shall remain forever free from sale or alienation. (U.S.C., title 16, sec. 361.) mit to bath-Free baths. Fractions of lots Conditions of titles.

June 16, 1880 (21 Stat. 288) - continued

office shall certify on the original certificate taken up, the number of the lots purchased therewith, and the price thereof.

SEC. 3. That those divisions of the Hot Springs Resvation, known as the mountatnous districts, not divided by streets on the maps made by the commissioners, but known and defined on the map and in the report of the commissioners as North Mountain, West Mountain, and Sugar Loaf Mountain, be, and the same are hereby forever reserved from sale, and dedicated to public use as parks, to be known, with Hot Springs Mountain, as the permanent reservation.

(Amended by \$1 Stat. 28. See p.

etary of Indesignate six is for schools.

SEC. 4. That whenever the town of Hot Springs shall procure elsewhere a suitable burying ground and shall cause the bodies now buried in the cemetery lot, within the limits of said town, to be decently removed and rein-terred, the title to said cemetery lot shall vest in the corporation of said town, to be held and used forever as a SEC. 5. That the Secretary of the Interior is hereby authorized to designate six lots from the unawarded grounds on the Hot Springs Reservation for the use of the common schools of the corporation of the town of Hot Springs, as sites for schoolhouses, and the lots when so designated are hereby dedicated to the use of common schools, and shall be used, controlled, and managed by the common-school officials of the district in which they may be located for such purposes only. The Secretary of the Interior is also authorized to convey to the Bap-tist Church of Hot Springs, whose church edifice was destroyed by fire, a suitable lot of ground not exceeding one-eighth of an acre from that portion of the Hot Springs Reservation laid off into lots and blocks, and forming part of the town site but not awarded to any claimants and not otherwise disposed of by this act

claimants and not otherwise disposed of by this act said conveyance to be on consideration of the payment of a sum equal to ten dollars per acre for said lot. SEC. 6. That the streets, courts, and alleys and other thoroughfares of the town of Hot Springs, as surveyed, opened, or established by the commissioners and repre-sented on the map of said town, and not included in the permanent reservation, be, and the same are hereby, ceded to the corporation of the town of Hot Springs for public use: *Provided*, *however*, that nothing in this act shall be so construed as to impair the rights or equities conferred upon claimants to said land by an act of Conof Hot conferred upon claimants to said land by an act of Con-gress approved March third, eighteen hundred and seventy-seven, and an act approved December sixteenth eighteen hundred and seventy-eight, in relation to the Hot Springs Reservation in the State of Arkansas.

lots and

SEC. 7. That that portion of the Hot Springs Reservation laid off into lots and blocks and forming part of

March 3, 1887 (24 Stat. 647)

Joint Resolution To authorize the use of hot water off the Govern-ment Reservation at Hot Springs, Arkansas, approved March 3, 1887 (24 Stat. 647)

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, Hot Springs. Ark. That the Secretary of the Interior be and he is hereby explicit to be the reservation. Previous of the untorized to continue to furnish to the bathhouses lo-bouses of the reservation. Previous and the secretary of the use of hot water for drinking and bathing purposes: Provided, That furnishing such Set to interfere bathhouses shall in no way interfere with the supply of Navy Benglial Say Benglial Say Benglial manent reservation subject to any further action of Con-

gress on the subject.



alleys ce

Baptist Church.

March 3, 1891 (26 Stat. 842)

An Act To regulate the granting of leases at Hot Springs, Arkansas, and for other purposes, approved March 3, 1891 (26 Stat. 842)

Be it enacted by the Senate and House of Repre-sentatives of the United States of America in Congress assembled. That the Secretary of the Interior is hereby Hot Springs. Ark. secretary of In-authorized and empowered to execute leases to the bath- terior may lease houses and bathhouse sites on the permanent reservation bathhouses, etc. at Hot Springs, Arkansas, for periods not exceeding twenty years, and at an annual rental of not less than thirty dollars per tub for each tub used in any bathhouse. Said annual rental shall be payable quarterly Payment-in advance, at the office of the Government Superintendent of said property, in Hot Springs, Arkansas: Provided, That the same rate for water rent shall be water rent charged for the water to all parties receiving the same, whether on or off the permanent reservation: Provided. That after the Army and Navy Hospital bathhouse, the public bathhouse, the bathhouses which are now or may hereafter be authorized on the permanent reserva-tion, the Arlington Hotel, and the bathhouses off the permanent reservation now authorized to be supplied Surplus water. with hot water, in the order herein named, if there shall still be a surplus of hot water the Secretary of the Interior may, in his discretion and under such regula-tions as he may prescribe acues het water to be furntions as he may prescribe, cause hot water to be furn-nished to bathhouses, hotels, and families off the perma-nent reservation: *Provided*, That such bathhouses, hotels, and families shall cause all connections for obtaining such hot water to be made at their own expense: Provided, That all water furnished to any hotel or family for other use than bathing shall be paid for at Rates. such reasonable price, as shall be fixed by the Secretary of the Interior: Provided further, That the Secretary of the Interior shall at the expiration of each period of five years during the continuance of each lease made Readjustment of hereunder readjust the terms and amounts of payment terms provided for therein as may be just, but not less than the minimum herein provided. (U.S.C., title 16, sec. 362.)

SEC. 2. That the Secretary of the Interior is hereby authorized to execute a lease of the Arlington Hotel site two Hotel. at Hot Springs, Arkansas, to the present lessees for a period of twenty years, and at an annual ground rent of two thousand five hundred dollars, for the first five years thereof, and at the end of said period of five years, Rent. and of each period of five years thereafter, he shall



March 3, 1891 (26 Stat. 842) - continued

LAWS FOR NAT. PARK SERVICE, PARKS, & MONUMENTS

readjust and fix the compensation to be paid during the ensuing five years, but not less than that hereinbefore

retary of In-ior to make regulations,

Use of water.

Charges.

Leases subject to regulations.

Provisions in leases.

Buildings subject to approval.

ensuing five years, but not less than that hereinbefore provided for. SEC. 3. That all power now possessed by the Secre-tary of the Interior for the regulating of leases of bath-houses, bathhouse privileges, or hotel rights on the res-ervation, or as to supplying hot water to places off the reservation, is hereby retained and continued in him; and full power is vested in the Secretary of the Interior to provide, in all leases to be executed against any combi-nation among lessees or their assigns, as to ownership, prices, or accommodations at any bathhouse; full power is also vested in him to make all needful rules and regu-lations as to the use of the hot water, and to prevent its lations as to the use of the hot water, and to prevent its waste, including full power to authorize the superintendent of the reservation to make examination and inspec-tion at any time of the manner of using the hot water at any bathtub, that it may be used in proper quantity only, and to prevent its waste; and also full power to provide and fix reasonable maximum charges for all baths, or bathing privileges, or services of any person connected with any bathhouse furnished to bathers; and for reasonable maximum charges to guests at the Ar-lington Hotel; and also, generally, the Secretary of the Interior may make all necessary rules and regulations as to said bathhouses and the service therein as shall be deemed best for the public interest, and to provide pen-alties for the violation of any regulation which may be enforced as though provided by act of Congress. All leases and grants of hot-water privileges shall be held to be subject to all regulations now in force or which may be herefter advected by the Section of the Leavier be subject to all regulations now in force or which may be hereafter adopted by the Secretary of the Interior, and for any violation of any regulation, known to the proprietor at the time of the offense, the lease or grant may be canceled by the Secretary of the Interior. It shall be expressly provided in all leases and grants of privileges for hot water that the bathhouse for which provision is made shall not be owned or controlled by provision is made shall not be owned or controlled by any person, company, or corporation which may be the owner of or interested (as stockholder or otherwise) in any other bathhouse on or near the Hot Springs Reser-vation; that neither the hot-water privilege granted nor any interest therein, nor the right to operate or control said bathhouse, shall be assigned or transferred by the party of the second part without the approval of the Secretary of the Interior first obtained, in writing; and if the ownership or control of said bathhouse be trans-ferred to any person, company or corporation owning or interested in any other bathhouse on or near said resor interested in any person, company or corporation owing or interested in any other bathhouse on or near said res-ervation, the Secretary of the Interior may, for that cause, deprive the bathhouse provided for of the hot water and cancel the lease or agreement. All buildings to be erected on the reservation shall be on plans first





March 3, 1891 (26 Stat. 842) - continued

approved by the Secretary of the Interior, and shall be required to be fireproof, as nearly as practicable. (U.S.C., title 16, sec. 363.)

SEC. 4. That the Secretary of the Interior, before exe-investigation to cuting any lease to bathhouses or bathhouse sites on the determine if per permanent reservation or contracts for the use of hot ed in more than water for bathhouses off the permanent reservation, ese bathhouse. . may make due investigation to ascertain whether the permake due investigation to ascertain whether the per-son, persons, or corporation applying for such lease or contract are not, directly or indirectly, interested in any manner whatever in any other bathhouse lease, interest, or privilege at or near Hot Springs, Arkansas, or whether he or they belong to any pool, combination or association so interested, or whether he or they are memassociation so interested, or whether he or they are mem-bers or stockholders in any corporation so interested, or, if a corporation, whether its members or any of them are members or stockholders of any other corporation or asso-ciation interested in any other bathhouse, lease, interest or privilege as aforesaid, and in order to arrive at the facts in any such case he is authorized to send for persons and papers, administer oaths to witnesses, and require affidavits from applicants; and any such person making a false oath or affidavit in the premises shall be deemed a false oath or affidavit in the premises shall be decined guilty of perjury, and, upon conviction, subject to all the pains and penalties of perjury under the statutes of the United States; and whenever, either at the time of leas-ing or other time it appears to the satisfaction of the said verteture for Scantery that such interest in other bathhouse, lease, pooling, etc. interest, or privilege exists, or at any time any pool or combination exists between any two or more bathhouses or he deems it for the best interests of the management of the Hot Springs Reservation and waters, or for the public interest he may refuse such lease, license, permit, or other privilege, or forfeit any lease or privilege wherein the parties interested have become otherwise interested

as aforesaid. (U.S.C., title 16, sec. 364.) SEC. 5. That the consent of the United States is here-by given for the taxation, under the authority of the sonal property laws of the State of Arkansas applicable to the equal under State law. taxation of personal property in that State, as personal property of all structures and other property in private ownership on the Hot Springs Reservation. (U.S.C., title 16, sec. 365.) 16, sec. 365.

SEC. 6. That the authority heretofore conferred upon the Secretary of the Interior to collect the hot water upon Collection of said reservation shall be so construed as to require water said reservation shall be so construed as to require water to be collected only where such collection is necessary for its proper distribution, and not where by gravity the same can be properly utilized. (U.S.C., title 16, sec. 366.) SEC. 7. That the Secretary of the Interior may direct sale of lots the public sale of all unsold Government lots on the Hot suborised.

Springs Reservation, and not now permanently reserved at the city of Hot Springs, after having had the same



June 3, 1912 (37 Stat. 121)

An Act Authorizing the Leo N. Levi Memorial Hospital Association to occupy and construct buildings for the use of the corporation on lots numbered three and four, block numbered one hundred and fourteen, in the city of Hot Springs, Arkansas, approved June 3, 1912 (\$7 Stat. 121)

Be it enacted by the Scnate and House of Representatives of the United States of America in Congress assembled, That the exclusive right to use, occupy, and enjoy the possession of all of lots numbered three and four, in block numbered one hundred and fourteen, in the city of Hot Springs, Arkansas, is by this Act granted to the Leo dot Springs, Arkansas, is by this Act granted to the Leo dot Springs, Arkansas, is by this Act granted to the Leo dot Springs, Arkansas, is by this Act granted to the Leo dot Springs, Arkansas, is by this Act granted to the Leo dot Springs, Arkansas, is by this Act granted to the Leo dot Springs, Arkansas, is by this Act granted to the Leo dot Springs, Arkansas, is by this Act granted to the Leo dot Springs, Arkansas, is by this Act granted to the Leo dot Springs, Arkansas, is by this Act granted to the Leo dot Springs, Arkansas, is by this Act granted to the sold corporation. The rights and privileges granted under this Act Duration of shall continue as long as the property is used and oc. Privilege. cupied for the purposes mentioned in this Act, subject, Forteliver ter however, to the following conditions and limitations, namely, that unless said Leo N. Levi Memorial Hospital Association shall within five years after the passage of this Act erect and equip a suitable and sightly building for the purposes above mentioned, or if said Leo N. Levi Memorial Hospital Association shall at any time hereafter use or permit the premises to be used for any other purpose than that herein granted, then and in either event all the rights, privileges, and powers by this Act granted and conferred upon said association shall be forfieled to the United States.

SEC. 2. That upon compliance with the conditions and tense of water, requirements of section one of this Act by said corporation the Secretary of the Interior, in his discretion, is hereby authorized to lease the said association a sufficient quantity of hot water to accommodate said association for all drinking purposes, and to supply not more than five bathtubs, under such rules and regulations as he may prescribe; and all improvements made upon said property shall be subject to the approval of the Secretary of the Interior.

of the Interior. SEC. 3. That the right to alter, amend, or repeal this Amendment. Act is hereby expressly reserved.







March 4, 1921 (41 Stat. 1407) - Redesignated as a national park

Excerpt from "An Act Making appropriations for sundry civil ex-penses of the Government for the fiscal year ending June 30, 1922, and for other purposes," approved March 4, 1921 (41 Stat. 4407) 1407)

Hot Springs Na-tional Park and Ast) Yel. 29, p. 353. Hot Springs National Park. (U.S.C., title 16, secs. 2 and 251) and 361.) pp. 9-12.

February 14, 1931 (46 Stat. 1109)

An Act To provide for the retention by the United States of a site within the Hot Springs National Park formerly occupied by the Arlington Hotel and Bathhouse, for park and landscape purposes, approved February 14, 1931 (46 Stat. 1109)

bied, the support and the second states of the state inductor of the state second states of the United States of America in Congress assembled, That the site within the Hot Springs National Park Hot Springs Park Ho

March 2, 1931 (46 Stat. 1462)

370a.)

An Act To regulate the prescribing and use of waters from the Hot Springs National Park at Hot Springs, Arkansas, and for other purposes, approved March 2, 1931 (46 Stat. 1462)

Be it enacted by the Senate and House of Representa-tives of the United States of America in Congress as-sembled, That section 369, tille 16, United States Code, Hot Series Na-being a provision of the Sundry Civil Appropriation Act Regulations can approved June 5, 1920 (41 Stat. 874, 918), is hereby create and amended so as to read as follows:

amended so as to read as follows: "The Secretary of the Interior is hereby authorized amended so to assess and collect from physicians who desire to pre-scribe the hot waters from the Hot Springs National Park reasonable fees for examination and registration; timed, and he is also authorized to assess and collect from bath other targe and he is also authorized to assess and conect from bath attendants and masseurs operating in bathhouses receiv-ing hot water from the park reasonable annual charges to cover the cost of physical examinations." (U.S.C., 6th supp., title 16, sec. 369.)

June 2, 1937 (50 Stat. 243)

An Act To accept the cession by the State of Arkansas of juris-diction over all lands now or hereafter included within the Hot Springs National Park, Arkansas, and for others ' pur-poses, approved June 2, 1937 (50 Stat. 243)

Hot Springs National Park, Ark. Jurisdict accepted

poses, approved June 2, 1937 (30 Stat. 245) Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the provisions of an Act of the Legislature of the State of Arkansas, approved March 25, 1933 (numbered 166), ceding to the United States jurisdiction over all lands now or hereafter included within the Hot Springs National Park, are hereby accepted, and the provisions of the Act approved April 20, 1904 (33 Stat. 187), as amended by the Acts of March 2, 1907 (34 Stat. 1218), and March 3, 1911 (36 Stat. 1086), relating to the Hot Springs Mountain Reserva-tion, Arkansas, are hereby extended to all lands now or hereafter included within said park.

16 U.S.C.

34

APPENDIX B: Planning History and Needs

Past Plans

Annual Performance Plan (APP), FY 2010	2010
Cultural Landscape Report and Environmental Assessment	2010
Long Range Interpretive PLAN	2009
	Rev. 2012
Strategic Plan for Hot Springs National Park,	2008
Остовег 1, 2008 – September 30, 2012	
HOT SPRINGS NATIONAL PARK CORE OPERATIONS FINAL REPORT	2007
Hot Springs National Park Business Plan	2007
HOT SPRINGS NATIONAL PARK FIRE MANAGEMENT PLAN, ENVIRONMENTAL ASSESSMENT	2006
Resource Management Plan	1998
Landscape Management Plan – Bathhouse Row	1994
Statement for Management: Hot Springs Reservation	1990
GENERAL MANAGEMENT PLAN, DEVELOPMENT CONCEPT PLAN, ENVIRONMENTAL ASSESSMENT	1985
Lands Protection Plan	1985
HOT SPRINGS NATIONAL PARK GENERAL MANAGEMENT PLAN	1978

Plans currently under development

- Administrative History
- Recharge Zone Protection Plan
- Wayside Exhibit Plan
- Fordyce Bathhouse Exhibit Plan
- Healthy Parks Healthy People Strategic Action Plan
- Recharge Zone Protection Study (USGS)

Plans needed

- Cultural Landscape Report for Reserve Avenue and the Fordyce Ricks Estate
- A Landscape Preservation Maintenance Plan for implementation of CLR recommendations
- A Development Concept Plan for Gulpha Gorge Campground; providing a comprehensive view of the campground to bring it to contemporary standards
- General Management Plan to establish overall management direction for the park
- Business Plan Update
- Ethnographic Study
- Trails Development Plan
- Boundary Survey to determine current park boundary, and
- Boundary Assessment Plan for recharge zone if determined necessary following completion of the Recharge Zone Protection Study

APPENDIX C: Climate Change and Hot Springs National Park

Prepared by Don Weeks, NPS Water Resources Division, March 22, 2011

The hot springs at Hot Springs National Park are recharged by infiltrating rainwater through higher elevation exposures of Bigfork Chert and Arkansas Novaculite, and any changes in the recharge/ runoff ratio in the recharge area could affect the discharge and temperature at the hot springs (Kressee and Hays 2009). Water discharging from the hot springs at Hot Springs National Park includes a small but important shallow component of cold water recharge (Bell and Hays 2007). Temperature monitoring data shows that recharge from rainfall generally causes downward spikes in water temperature for many of the springs, providing evidence that cooler shallow groundwater is mixing with the thermal springwater (Bell and Hays 2007; Yeatts 2006).

The climate change projected for the Hot Springs National Park region could influence both discharge and temperature of the park's hot springs. Based on the latest climate models for the region, air temperature is projected to increase between +2.6°C and +4.4°C and precipitation is projected to decrease between 2% and 8%, between 1990 and 2100 (Gonzalez et al. 2010; IPCC 2007; Mitchell and Jones 2005). Under this projected climate future, one would expect less shallow groundwater mixing resulting in less thermal spring discharge with warmer temperatures.

Cited References

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 U.S. Geological Survey Scientific Investigations Report 2007-5004. 45 pp.

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 - 2007 *Climate Change 2007: The Physical Science Basis.* Cambridge University Press, Cambridge, UK.



Kresse, T.M., and Hays, P.D.

2009 Geochemistry, comparative analysis, and physical and chemical characteristics of the thermal waters east of Hot Springs National Park, Arkansas. 2006-09. U.S. Geological Survey Scientific Investigation Report 2009-5263, 48 pp.

Mitchell, T.D., and P.D. Jones

2005 "An improved method of constructing a database of monthly climate observations and associated high-resolution grids." *International Journal of Climatology 25: 693-712.*

Law, Policy, and Guidance related to climate change

Executive Order 13423

2007 "Strengthening Federal Environmental, Energy, and Transportation Management." *Requires federal agencies to lead by example in reduction in greenhouse gas emissions, water conservation, petroleum consumption with an increase in energy efficiency and sustainable practices.*

Executive Order 13514

2009 "Federal Leadership in Environmental, Energy, and Economic Performance." Expands on the energy reduction and environmental performance requirements of E.O. 13423.

Secretarial Order 3226, Amendment No. 1

2009 "Evaluating Climate Change Impacts in Management Planning." "Each bureau and office of the DOI shall ... consider and analyze potential climate change impacts when undertaking long-range planning exercises, setting priorities for scientific research and investigations, and/or when making major decisions affecting DOI resources."

National Park Service

- 2006 Management Policies. 4.7.2 Weather and climate. U.S. Department of the Interior. p. 53: "…accelerated climate change may significantly alter park ecosystems. Thus, parks containing significant natural resources will gather and maintain baseline climatological data for reference."
- 2010 Climate Change Response Strategy. U.S. Department of the Interior. 28 pp. "Goal 5. Incorporate climate change considerations and responses in all levels of NPS Planning."







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

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Midwest Region Foundation Statement Recommendation Hot Springs National Park

June 2012

This Foundation Statement has been prepared as a collaborative effort between Park and Regional staff, facilitated by the Denver Service Center, and is recommended for approval by the Midwest Regional Director.

u. Auro

RECOMMENDED Superintendent, Hot Springs National Park

RECOMMENDED

Planning Division Chief, Midwest Regional Office

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RECOMMENDED Associate Regional Director, MWRO Planning, Communication and Legislation

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APPROVED Regional Director, Midwest Region

12 June 12

Date

7-20-2012

Date

Date

7-23-12

7-26-12

Date

Foundation Document • Hot Springs National Park



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