



**RESOURCES MANAGEMENT PLAN:
HOT SPRINGS NATIONAL PARK**

RECOMMENDED: _____ Date
Superintendent

APPROVED: _____ Date
Regional Director

TABLE OF CONTENTS

| | | |
|------|---|----|
| I. | INTRODUCTION..... | 1 |
| | Resource Management Objectives..... | 3 |
| II. | PRESENT RESOURCE STATUS | 5 |
| | Natural Resources Baseline Information | 5 |
| | Natural Resources..... | 9 |
| | Cultural Resources Baseline Information | 13 |
| | Cultural Resources | |
| | Status of Archaeological Sites | 14 |
| | Status of Structures | 17 |
| | Status of Objects | 19 |
| | Status of Archival and Manuscript Collections..... | 20 |
| | Status of Cultural Landscapes | 22 |
| | Status of Ethnographic Resources | 23 |
| | Cultural Context/Themes..... | 24 |
| III. | RESOURCES MANAGEMENT PROGRAM..... | 32 |
| | Overview of Current Program and Needs | 32 |
| | Table 1: Personnel | |
| | Table 2: Natural and Cultural Resources Funding..... | |
| | Programming Sheet 1: Ongoing and Funded Activities..... | |
| | Programming Sheet 2: Unfunded Activities | |
| | Project Statements | |
| | HOSP | |
| | Cultural | |
| | Integrated | |
| | Natural | |
| IV. | APPENDICES | |

Cultural Resources Documentation Checklist

Park Cultural Resources Status Summary Charts.....

 Summary Chart for Archaeological Sites

 Summary Chart for Structures

 Summary Chart for Objects

 Summary Chart for Cultural Landscapes.....

 Summary Chart for Ethnographic Resources

Bibliography of References

Cultural Resources Bibliography (CRBIB).....

Natural Resources Bibliography (NRBIB).....

RESOURCES MANAGEMENT PLAN

HOT SPRINGS NATIONAL PARK

I. INTRODUCTION

The purpose of this Resources Management Plan is to provide a course of action for the continuous protection, management, and maintenance of cultural and natural resources found in Hot Springs National Park. Although the park was established specifically for the protection of the thermal water natural resources, present resource management will focus on all natural and cultural resources where possible. The plan provides a basic framework for management activities which will preserve the natural and cultural resources in accordance with National Park Service standards and legislative mandates. It also details a set of research projects and management priorities that are designed to meet the park's most significant resources management needs. The plan is flexible in that it may be continuously updated, revised, and supplemented in order to meet the changing needs of the park.

The land on which Hot Springs National Park is situated was originally part of the 1803 Louisiana Purchase. By an 1832 Act of the Twenty-Second Congress of the United States, the government reserved from settlement the thermal and salt springs, along with four sections of surrounding land, but settlers nonetheless continued to build bathhouses and residences around the springs. In 1875 the government was forced to reconfirm its jurisdiction over the area in the Court of Claims. In 1877, the Hot Springs Commission was authorized to survey the area, reestablish the boundaries of the reservation, and sell unwanted lots to claimants and other private citizens, thus establishing the permanent Hot Springs Reservation. From this date on, the government closely monitored and supervised the springs and their use by private citizens, guiding their development and protecting their therapeutic qualities. The reservation became a national park in 1921.

The park and its surrounding mountains exhibit a south-central United States pine-oak-hickory forest ecosystem. The park's vegetation, thermal waters, cold water springs, bathhouses and associated cultural features, foot trails, prehistoric and historic novaculite quarries, and general physiography combine to form a 4876.77 acre area (as of February 20, 1997) of resource preservation and interpretation that is under the exclusive legislative jurisdiction of the federal government. Another 672.69 acres are within the park boundary but are not federally owned. The city of Hot Springs, Arkansas, with an approximate population of 33,000, lies immediately outside the park and exerts a significant influence on it.

The hot springs are the primary natural resource of the park, but they have not been preserved in their unaltered state as natural surface phenomena. They have instead been managed to conserve the production of uncontaminated hot water for public use. The mountains within the park are also managed within this conservation philosophy in order to preserve the hydrological system that feeds the springs. The

primary cultural resource of the park is the Historic Landmark District of Bathhouse Row, which embodies the culmination of spa development at Hot Springs. The group of eight bathhouses, built between 1892 and 1923, is the last of a continuum of facilities designed to utilize the thermal waters and is one of the few collections of historic bathhouses remaining in the United States. It is the only such spa controlled and developed by the U.S. Government, albeit in conjunction with private entrepreneurs. Contributing to this resource are the mountain trails, drives, fountains, landscaped walks, and formal entrances which were developed by the government to enhance the aesthetic and physical experiences of spa visitors. A final important cultural resource that has received little emphasis in the past is the extensive system of prehistoric and historic novaculite quarries that runs through and beyond the park boundaries.

The *General Management Plan/Development Concept Plan* (June 1986) established the direction of the cultural resources management program as focusing on Bathhouse Row: rehabilitate the Fordyce Bathhouse as the park's visitor center, offer the other vacant bathhouses for private rehabilitation and use under the Historic Properties Leasing Act, develop and manage the Bathhouse Row area as a historic landscape, initiate research and documentation of the other cultural features in the park, and improve interpretation of the thermal spring waters, their public use, and the development of the Hot Springs Spa ethic. Emphases of the natural resources management program were identified as: investigate and protect the recharge area of the thermal springs, evaluate the thermal water use and distribution system, improve vegetation management and restore disturbed areas, research and document the park's natural resources, and improve trails and hiking opportunities. With the opening of the Fordyce Bathhouse Visitor Center in 1989, the first of these goals was realized, but the rest are still current.

The State Historic Preservation Officer is involved in many cultural resources projects; copies of park XXX forms relating to changes to historic elements are furnished to that office for review and comment. The Arkansas Natural Heritage Commission maintains a database listing of species and habitats of special interest; this information is provided to the park for consideration in all management proposals.

Hot Springs National Park is open to the visiting public 24 hours each day. Overnight facilities are readily available in the surrounding community and within the park at the Gulpha Gorge Campground. The park also has several developed picnic areas. Hot Springs National Park is primarily managed as an historic area but includes significant natural resources as well. The two are integrated whenever possible to enhance both cultural and natural interpretation.

RESOURCE MANAGEMENT OBJECTIVES

According to the Statement for Management (1988), the park's cultural and natural resources management objectives are as follows:

"To preserve the integrity of the historic structures, designed landscape, and other cultural resources of the Bathhouse Row Historic District.

"To identify significant cultural resources and ensure their protection.

"To utilize existing facilities and infrastructure to the maximum extent possible without compromising resource values.

"To ensure the preservation of the thermal springs, and protect the entire hydrologic system and the purity of the thermal water.

"To maintain healthy ecological systems.

"To protect and maintain the natural diversity of plants and animals outside of areas managed primarily for cultural resources or developed areas.

"To promote public understanding and appreciation of the park's thermal features, geological and hydrological resources, and ecological communities.

"To foster public awareness of man's use of the thermal spring water and the development of the Hot Springs Spa.

"To orient visitors to park resources and inform them about opportunities in the mountain lands area of the park.

"To ensure that facilities are attractive and well-maintained and that a scenic setting is provided for Bathhouse Row and downtown Hot Springs.

"To provide a full range of traditional bathing services, as well as opportunities to experience the thermal waters in a less formal way.

"To encourage the continued evolution of the spa resort tradition at Hot Springs; update facilities and provide more modern bathing services.

"To ensure that facilities for visitor use and administration are compatible with natural and cultural resource values and that park roads and other transportation systems provide safe, efficient public access in a manner consistent with the protection of resource values.

"To cooperate with other governmental agencies, private organizations, and citizens to ensure the following:

Land use and development in the park and its vicinity do not adversely affect the park's natural and cultural resources.

Facilities and programs within the park and outside it are fully coordinated to efficiently serve the needs of regional and local visitors for information and orientation services, traditional therapeutic bathing services, outdoor recreation, and interpretive services.

Traffic flow, pedestrian access, and parking problems are minimized.

"In cooperation with the city of Hot Springs and the private sector, to provide for appropriate adaptive uses of bathhouses, support the rehabilitation and revitalization of the downtown area, and develop a flood-control strategy along Central Avenue."

As mandated in the Government Performance and Results Act (GPRA), the park has recently developed preliminary park mission goals, but these have not yet been approved.

In order to more effectively accomplish its objectives, the park is divided into four management zones: Historic, Natural, Park Development, and Special Use. The Historic Zone encompasses less than 10% of the total land base, yet requires the most management decisions. It is managed to preserve, protect, and interpret cultural resources and settings significant because of their association with historic persons, events, or periods. Not all cultural resources are placed in this zone; it is applied only to lands with well-documented cultural resources. The Preservation Subzone includes the exterior and landscaping features of the Bathhouse Row Historic Landmark District and the Arlington Lawn area, while the Preservation/Adaptive Use Subzone includes the interiors of the bathhouses and the administration building in order to allow their use and appropriate modification for leasing, public use, or administrative functions.

The Natural Zone includes lands with prehistoric and historic quarry sites that are protected but not actively managed or interpreted, lands of no historic significance, or lands where little or no development will occur. These are managed to conserve natural resources and processes while accommodating visitor uses and experiences that do not adversely affect the natural systems.

The Park Development Zone contains those lands needed to provide support to the park and to the visitor which are not classified as historic/adaptive use (although a number of the structures in this zone are on the List of Classified Structures and have historical significance). It also encompasses areas where development or intensive use has substantially changed the natural environment or historical setting. Within this zone, the Administrative Development Subzone supports park management and operations, including the maintenance facilities and the Reserve Avenue facilities. The Visitor Use/Recreational Development Subzone provides services or recreational opportunities to park visitors and includes the Libbey Memorial Physical Medicine

Center/Hot Springs Health Spa buildings and grounds; the Hot Springs Mountain Observation Tower and its parking lot; Hot Springs and North Mountain overlooks and picnic areas; West Mountain overlooks, parking areas, and trail heads; and Gulpha Gorge Campground, amphitheater, picnic grounds, camping areas, comfort stations, and roads. The Access/Circulation Subzone includes paved park roads maintained by the National Park Service and providing access to park resources or facilities. The Landscape Management Subzone includes Whittington Park.

The Special Use Zone contains areas within the authorized park boundary where land uses by other governmental agencies or private landowners (though compatible with the protection of park resources) are of primary importance, with NPS management emphasis secondary to that of other interests. Within this zone the Private Use Subzone encompasses commercial/retail development, low-density residential development (inholdings), and cemeteries. The Transportation/Utilities Subzone includes underground natural gas line rights-of-way, radio transmission towers, overhead power line rights-of-way, and other lands managed primarily or exclusively for non-park purposes. The Public/Institutional Subzone consists of lands owned by state and local governmental agencies outside the springs' recharge zone and used for purposes compatible with the park (including Hot Springs Rehabilitation Center, DeSoto Park, Hot Springs School District facilities, and the Hot Springs municipal watershed lands).

II. PRESENT RESOURCE STATUS

NATURAL RESOURCE BASELINE INFORMATION

The park currently lacks a thorough inventory of wildlife. [There is an inventory underway, the result of a recognized need nationwide.] It also needs an endangered and threatened plant and animal species survey. There has been limited systematic monitoring of natural resources. Soils, 1:24000 Soil Conservation Survey (SCS) maps, and boundary maps exist and will be entered into the park's Geographic Information System as time commitments allow. High resolution color aerial photography has been obtained and will be converted to digital imagery files for incorporation into the park's GIS system. This imagery can then be utilized to monitor temporal changes in vegetative cover types as well as adjacent land use patterns that might adversely affect park resources. Although the park has limited surface water exposures, overall quality is excellent and doesn't require any mitigation strategy. Cold water springs are exposed to ultra-violet light and ozone before being released for consumption. Monitoring required by the Arkansas State Department of Health is now being carried out in a certified, in-park laboratory by trained personnel. Park management lacks air quality monitoring and information.

The following tables list the park's current status on Inventory and Monitoring of baseline data. Baseline data is described as either meeting or not meeting the minimal standards as established in the servicewide "Standards for Natural

Resources Inventorying and Monitoring," NPS-75. Where it has been identified that baseline information does not meet the minimum standard, a project statement to meet this need has been prepared.

HOT SPRINGS NATIONAL PARK

ASSESSMENT OF EXISTING INVENTORYING AND MONITORING PROGRAMS

| Function | Level of Effort | |
|---|--------------------------------------|---------------------------------|
| | Below Standard | Meets Standard |
| Chemical Inventorying & Monitoring | | |
| Surface Waters | X | |
| Atmospheric Deposition | X | |
| Geo-Physical Inventorying & Monitoring | | |
| Natural event records | X | |
| Develop Maps: Imagery from satellites Topographic | | X X |
| Geology: Geologic Maps Soils | | X X |
| Physical geology, mineralogy and soils: Soil analysis Sediment transport Principle mineral composition Geo-hazards | X X | X X |
| Hydrology: Develop watershed maps Inventory through description: Streams Wetlands Groundwater Measure physical parameters: Temperature Turbidity Stage and discharge | X X X X | X X X |
| Create hydrologic models of surface | X | |

| Function | Level of Effort | |
|---|------------------------------|----------------|
| | Below Standard | Meets Standard |
| water | | |
| Meteorology Indicate meteorological parameters: Precipitation Air Temperature Atmospheric conditions (e.g. RH, wind direction, etc.) | | X X X |
| Biological Inventorying & Monitoring | | |
| Historical database | X | |
| Species: Inventory of vascular plants including distribution Inventory of mammals, birds, fish, amphibians and reptiles including distribution Listing of species that are threatened, endangered, endemic or non-native Distribution map of plant and animal species | X X X X | |
| Populations: For selected species: Distribution Population size/density/cover Age/state/size class structure Growth/recruitment/productivity/ mortality | X X X X | |
| Communities: Vegetation/land cover map(s) | X | |
| Integration: Qualitative community descriptions to correspond with vegetation maps | X | |
| Geography: Location of resources associated with an appropriate base map series and coordinate system Resources mapped accurately to | X X | |

| Function | Level of Effort | |
|---|-----------------|----------------|
| | Below Standard | Meets Standard |
| GIS standards | | |
| Accurate and comprehensive representation of park landscape (e.g. satellite, aerial photography, survey as appropriate) | X | |
| Human Use | | |
| Event Records | | X |
| Maps: Develop maps to indicate present areas of use | | X |
| Develop maps to indicate past areas of use | | X |
| Human Activities: Identify each type of activity present (e.g. farming, grazing, residential, recreation, etc.) | | X |
| Quantify the identified activities (e.g. yield/acre, density, number of visitors) | | X |
| Ownership: Identify whether ownership is public or private | | X |
| Indicate owner for each area | | X |
| Demography | | X |
| Domestic Animals (e.g. livestock, and others) | | X |
| Legal Matters: Cite acts, regulations, policies, etc. | | X |
| Indicate management activities and planning | | X |
| Education Activities | X | |
| Regional Land Use Planning | | X |
| Other Social Sciences Studies: List any human studies taking place | | X |

| Function | Level of Effort | |
|---|-----------------|----------------|
| | Below Standard | Meets Standard |
| List any econometric studies taking place | | X |

Natural Resources

The Ouachita Mountains are a southern extension of the Ozark Plateau, which forms the only major topographic relief for a vast area of the midwestern and south-central United States. The topography was formed in late Paleozoic times by tremendous geological forces that acted to uplift, fold, fault, fracture, and harden inland seabed sediments. Subsequent erosion has led to the formation of the present ridge and valley landscape. The narrow steep ridges of the Zigzag Mountains, the subrange that dominates here, are capped with novaculite rock outcrops. These outcrops are unique to the Ouachita Mountains, and the finely grained structure of the novaculite is known for its superior quality as a natural whetstone.

The natural thermal springs are the primary resource of Hot Springs National Park. The presence of the hot springs is a result of the unique geology of the area in combination with the present topography. The water is geothermally heated at an unusually shallow depth of several thousand feet. The water then rises through faults in the Hot Springs sandstone formation to emerge from the thermal springs. Through radiocarbon dating, this process has been determined to take over 4,000 years. In relation to the springs' function, park lands are viewed as two interrelated units: the discharge zone and the recharge zone.

The discharge zone is a narrow strip about a quarter mile long at the foot of Hot Springs Mountain where the thermal water emerges from fractures in the underlying sandstone formation. This area has been the focus of human use and intensive development over the years and is now the site of Bathhouse Row and downtown Hot Springs. The springs themselves are largely concealed from modern visitors except for three display areas along the row. The rest of the springs were capped before 1901 to prevent contamination; today, the spring water is diverted into the park's extensive thermal water distribution system.

The recharge zone includes the highly permeable Bigfork cherts and the Arkansas novaculite formation. The largest outcrops of these formations generally occur on the mountain slopes and narrow ridges above 700 feet in elevation. When plotted on a map, they form long ellipses around the valleys drained by Hot Springs and Gulpha creeks in the park, and they extend well beyond the park boundary to the north and east into the upper basin of the South Fork Saline River. Scientific studies indicate that perhaps 50 to 75 percent of the recharge zone is within the present park boundary and encompasses much of the mountain lands area of the park. However,

it appears possible that the hydrologic system could be disrupted by the wells within any portion of the system.

U.S. Geological Survey Professional Paper 1044-C, *The Waters of Hot Springs National Park - Their Nature and Origin*, postulated the surface recharge area and the recharge mechanism of the thermal springs. This paper calls for additional studies to validate these hypotheses, involving drilling several deep sampling wells and interpreting results.

The effects on the hot springs resulting from urban development within the Hot Springs Creek valley have not been fully quantified because data about past flows from the springs is of limited value today.¹ About 80 percent of the remaining land in the basins of Hot Springs and Gulpha Creeks is hilly and unsuitable for construction, limiting some of the potential for development that would affect the recharge zone. NPS land acquisitions have reversed or prevented most incompatible development within the park boundary. Outside the park boundary to the northeast, the gentler topography of the upper basins of Gulpha Creek and the South Fork of the Saline River poses fewer natural restrictions to development, but because of the area's relative isolation and the general growth trend to the south, little development has yet occurred.

Numerous studies have been conducted on the springs over the past 150+ years. Monitoring studies were done in 1890, 1902, and by the U.S. Geological Survey in 1921-22. A research project undertaken by the U.S.G.S. and jointly funded with the National Park Service resulted in the most complete geologic/hydrologic study available to date: the 1979 U.S.G.S. Professional Paper 1044-C. More recently, temperature and flow monitoring were conducted by U.S.G.S. in the late 1970s, but a major plumbing overhaul of the springs' flow collection system interrupted the study in the middle of the data collection phase.

Currently the water flow from 23 thermal springs is being collected. Another NPS-funded study is under way. A calibrated weir system was installed in the fall of 1988 to measure the temperature and quantity of 1) flow from the combined collection system into the main storage vault underneath the park administration building, 2) stage (depth) of water in this collection vault, and 3) overflow being "dumped" into the underground creek arch when the storage system is at capacity. This study, if continued over a sufficient time period, will monitor and record the natural water flow conditions and variations, providing management with data necessary to evaluate impacts and proposed uses of the waters. This project will also meet the statutory

¹ Spring flow estimates were taken during Hunter and Dunbar's 1804 expedition, Major Stephen Long's 1818 expedition, and David Dale Owen's 1860 investigations; they also appear in other early publications through the mid 1900s. While the results may not be adequately comparable with those obtained through modern research design, they were done in accordance with the scientific methodology of their time period and are certainly of some value.

requirement of Public Law 99-591, sec. 2(b), Department of the Interior and Related Agencies Appropriations Act, directing that agencies "maintain a monitoring program for each significant thermal feature" identified by the Secretary; the park's thermal springs are so identified in the Federal Register. Originally conducted by the U.S. Geological Survey, this study is now operated by the park.

The water quality of all public drinking water (including the cold water springs available for public consumption) is routinely sampled on a schedule approved by the Public Health Officer in the NPS's Midwest Regional Office. These samples are taken and studied by a licensed, fully trained park employee working in the park's own water monitoring lab, which is certified by the Arkansas Department of Health on behalf of the Federal Environmental Protection Agency. The surface waters, which percolate downward and eventually recharge the thermal springs, are not being routinely monitored for quality. The park experienced a polychlorinated biphenyl (PCB) "scare" in the summer of 1986. In response to a local resident's concern over upstream oil settling ponds used to lubricate rock-cutting saws, the upper Sleepy Valley pond was sampled for chemical analysis. No PCBs were found in pond sediment; minute traces of PCBs were found in fish tissue at a level indicating no cause for concern.

In March, 1985 the Hot Springs Rehabilitation Center requested the use of significant quantities of thermal waters to heat the large Center building. This was the principal factor in initiating a contract study of the use, storage, and allocation efficiency of the thermal waters and the water system by Coury and Associates Inc, Wheatridge, Colorado. Phase I results of the study favor the design and construction of a closed-loop heat-recovery system to 1) supply the required amount of cooled thermal water for the park distribution system, and 2) extract the heat from "surplus" thermal water that is presently exhausted into the underground creek arch once the park's storage tanks are filled to capacity. This heat would then be sold to customers for year-around uses such as domestic water heating. The effects of the loss of the thermal water heat on the creek environment have not been addressed.

The thermal water plumbing system has been rehabilitated and is in good condition. In project phase I (1975) and phase II (1981) the collection system from the spring boxes into the creek arch and on into the 268,000 gallon main collection reservoir underneath the park administration building was replaced. In phase III the collection system underneath the Quapaw and Maurice bathhouses was redone. Phase IV (1986) involved replacement of the thermal water distribution lines along Bathhouse Row. At some future date, the main collection reservoir and 4 associated reservoirs (5,000 to 400,000 gallons each) will require additional rehabilitation. Additional items for improved operation are proposed in the Coury and Associates report.

The most common topographic features of the park are the rocky mountain slopes with their novaculite outcrops and lush creek valleys. These areas support mixed stands of oak and hickory interspersed with shortleaf pine on the more exposed slopes and ridgetops. The forest understory contains flowering shrubs, a wide variety

of wildflowers, a rare local chinquapin species (*Castanea ozarkensis*), and occasionally the rare Graves spleenwort (*Asplenium gravesei*).

Although most of the park supports dense forest cover, it is unlikely that there is any virgin timber in the park, with the possible exception of a 150-acre stand of shortleaf pine (*Pinus echinata*) on the north slope of Sugarloaf Mountain. Reputedly this state's finest stand of shortleaf pine, it is registered under the Arkansas Natural Heritage Program. Even though considerable acreage in the park has been under federal control since 1832, prohibitions on timber cutting were not implemented until the area came under the jurisdiction of the National Park Service in 1916. Most of the lands acquired since 1972 have either been farmed, mined for gravel, logged for pulpwood, or cleared for homesites; many areas are in need of restoration or revegetation.

The park experienced a significant attack by Southern Pine Beetles in 1986. Due primarily to the closeness of residential and commercial timber resources immediately outside the park, control action was initiated. Funding of \$20,000 from U.S. Forest Service Insect and Disease Control was allocated in FY 1987. This amount was totally expended by the end of the summer in 1988; the infestation cycle also essentially went dormant that summer. The Southern Pine Beetle Management Plan is documented in the "List of Related Action Plans" in this Resources Management Plan.

The long history of ground disturbance related to the construction of bathhouses and other facilities, combined with the extensive use of exotic plant materials in formal landscape developments along Bathhouse Row, has produced diverse vegetative communities bearing little resemblance to the native vegetation. A rare blue-green alga (*Phormidium treleasei*) grows in the hot water display springs and fountains along the row; the only other known location of this species in North America is in springs at Banff, Alberta, Canada.

Several formally landscaped areas with a mixture of native and exotic species are located along Central, Whittington, and Reserve Avenues and also along Stonebridge Road. Some areas appear to be relatively natural, but most, such as Whittington Park, the Libbey Memorial Physical Medicine Center grounds, and the NPS facilities along Reserve Avenue, are comprised of lawns planted with native and exotic trees and some shrubbery. The most conspicuous landscape planting in the park is the stately succession of southern magnolia trees lining the east side of Central Avenue along the front of Bathhouse Row.

The park has a variety of developed areas and extensive urban interface with the city of Hot Springs. Manicured trails in the Bathhouse Row Historic District, dirt and gravel trails all around Hot Springs Mountain and West Mountain, and the rougher and rockier Sunset Trail across West Mountain, Music Mountain, and Sugarloaf Mountain to Fordyce Mountain, then southward to Gulpha Gorge, provide attractive and convenient recreational opportunities that are literally immediately available to downtown visitors and residents. Visitor safety is a fundamental concern. The park

conducts regular hazard tree inspections in major developed areas and along roadsides twice a year, and trims off or removes the evident safety hazards. The park has acquired an elevated bucket truck for this purpose.

Much of the park's boundary adjoins intensely developed urban residential areas. In general, the much of the boundary is adequately marked (although some areas need accurate delineation), but with the 1993 boundary change and land acquisition still in progress, boundary survey needs will continue into the future. Now that the park has acquired fee title interest in all of the residential homes in the Sleepy Valley subdivision, a program is underway to remove the man-made impoundments there by destruction of the dams and restoration of the land.

One historic and persistent land problem has resulted from the cutting away of steep hillsides immediately outside the boundary as park neighbors attempt to create level property for commercial development. This lack of lateral support results in loss of park lands through landslides and sloughing of the hillside. In the past this has caused frequent and massive slumping of West Mountain roads, the collapse of Oak Trail on West Mountain, and numerous slides behind buildings on Central Avenue, one of which resulted in the death of a store employee. Currently the problem is most evident behind the Arlington Hotel, the Park Hotel, behind the Burton-Eisele Clinic parking lot, and behind the Exchange Street free parking lots.

Wildlife within the park is typical of the region, consisting mostly of rodents, bats, and other small mammals. Because of the region's mild climate, bird species are varied and plentiful. Aquatic resources are limited to portions of several small creeks and are void of significant game fish. No endangered or threatened animal species are known to live in the park.

CULTURAL RESOURCES BASELINE INFORMATION

The park's cultural resources documentation is deficient in nearly every respect. Although the major planning documents such as the *Statement for Management*, *General Management Plan*, *Development Concept Plan*, and *Interpretive Prospectus* are on file, they are outdated and need revision. Rewriting them is currently not a high priority, since it is anticipated that the GPRA process may change the requirements for these and other planning tools. In the subcategory of "Servicewide Inventories, Lists, Catalogs and Registers," only the List of Classified Structures (LCS) is on file; the National Catalog of Museum Objects is in process. The LCS needs to be updated and augmented. All the current catalog records have been entered into the Automated National Cataloguing System (ANCS), but a backlog of accessioned objects await cataloguing. The Cultural Resources Bibliography (CRBIB) includes Hot Springs documents, but many references which should be included have been left out. Additional structures can be nominated for the National Register of Historic Places, and Cultural Sites and Landscapes Inventories need to be accomplished.

In the area of "Basic Cultural Resource Documents" only the museum's Scope of Collections is current and approved. Ethnographic documents are not needed at this park, but archeological and historic documents are sorely needed. None have been written, although a Phase I of a Cultural Landscapes Inventory (CLI) was completed in 1996.

Among the "Special Resource Studies and Plans," a Collection Management Plan is the only item that is current and approved, and it needs minor updating. Both it and the Collection Storage Plan were approved in 1993, but the latter needs extensive revisions to address the burgeoning archival collections and the issue of appropriate storage for the valuable Maurice stained glass. A Collection Condition Survey would also be useful in dealing with these and other curatorial issues. The Fordyce Bathhouse exhibit plan is still current and approved, as is the Historic Furnishings Report for the Fordyce Bathhouse. However, the park needs to complete a similar report for the Buckstaff Bathhouse. Historic Structures Reports are on file for the park administration building and all the bathhouses, but they are needed for most of the other structures on the LCS. Cultural Landscape Reports are also needed.

Status of Archaeological Sites:

The archeological significance of Hot Springs National Park and vicinity is imperfectly understood at this time. Future research within the park will illuminate the relationship of the human occupation here to the broader prehistoric sequence of the general area.

To date, fewer than 100 hectares (approximately 250 acres) have been officially surveyed for archeological sites in Hot Springs National Park. This represents, at most, a little over 5% of the federally owned land within park boundaries (as of February 20, 1997, federal acreage was 4876.77, and non-federal was 672.69). Park files indicate that 18 archeological surveys and/or excavations have been performed in the park. Not all these surveys resulted in discovery of sites. Within the park 16 sites are officially recorded with state offices. Since none of the sites have been formally evaluated except the Indian Mountain quarry, 3GA22 (described in more detail below), authoritative significance, condition, and impact levels cannot be assigned to any sites at this time. Furthermore, monitoring of these sites is infrequent at present, given the remoteness of some of their locations (off established patrol roads) and insufficient staffing.

Past archeological work has included a 1975 park-wide reconnaissance by Charles Baker of the Arkansas Archeological Survey and numerous *ad hoc* surveys preliminary to development in various sections of the park. These surveys were primarily surface/visual-based, with shovel tests at intervals specified in the *Arkansas State Plan for Historic Preservation*. Excavation was performed at the Ral Spring historic site above Bathhouse Row in March, 1983 (results were published in *The Arkansas Archeologist* in 1996 by archeologist Don Dickson). A 1990 investigation of

a small historic site in Gulpha Gorge campground culminated in a 1993 report by James Bradford and Charles Haecker, NPS archaeologists from Santa Fe, but apparently no state survey form was filed.

Much work remains to be done if the gaps in our understanding of park's cultural history are to be filled. No Historical Base Map or Archeological Overview/Assessment exists. A formal Cultural Sites Inventory (mandatory under NPS-28) has never been compiled for the park; therefore, no data has been entered, as is required, into the CSI's successor vehicle, the Archeological Sites Management Information System (ASMIS) database. A CSI for Hot Springs National Park awaits funding. No Identification, Evaluation, or Data Recovery Studies are underway or contemplated at this time, although several *ad hoc* surveys done prior to park development projects were approved by the Southwest Regional Office in the past few years. When these surveys encountered cultural resources, plans were modified so as not to impact the resources, in accordance with NPS Regional recommendations, and site data was registered with the Arkansas Archeological Survey. No Collection Studies are underway at this time, although Dr. Ann Early of Henderson State University and the Arkansas Archeological Survey in Arkadelphia, Arkansas, examined the park's aboriginal ceramic collection in 1996 in preparation for Native American Graves Protection and Repatriation Act (NAGPRA) negotiations. The Cultural Resources Management Bibliography (CRBIB) kept at Washington was recently updated, but a printout of the most recent version showed that many references should be added, if it is to reflect the full spectrum of published and unpublished manuscripts pertaining to the park. One Special History Study on Bathhouse Row, *Out of the Vapors*, was printed in 1988.

No comprehensive overview of the park's archeological and historical resources exists. Projects that would synthesize extant published and unpublished literature, and that would obtain new information, have been "on hold" for years pending the allocation of requisite funds. Doing a job that meets professional (and mandated) standards will involve significant costs; the project statement for the Archeological Inventory makes this clear. It should be noted that even when all such projects have been completed, the park will need sufficient Protection or Cultural Resource Management staff to maintain archeological resources monitoring.

The only survey done for the specific purpose of inventorying park-wide archeological resources was the one by Charles Baker, mentioned above. Archaeologists in the state understand that it was meant as a reconnaissance, not a complete inventory, despite its title. Baker concentrated his efforts in areas of known sites, watersheds, and along well-marked hiking trails. Sites have been discovered since then as a result of miscellaneous surveys, some by qualified park staff and some by professional archaeologists. Areas investigated during these surveys tended to be somewhat linear, due to the nature of proposed developments that led to the surveys--trail extensions, flood-control tunnels, buried utility lines, etc. Sites discovered in the park thus far date from Archaic and Woodland periods of prehistory through the historic period of the 1900s. The Archaic and Woodland sites are mostly

quarries but also include occupation sites 3GA40, 3GA41, 3GA42, 3GA43, and 3GA44 on Bull Bayou, with possible sites 3GA564 and 3GA566 elsewhere. Historic sites (none of which are aboriginal) include 3GA153, the Ral Spring; 3GA567 on West Mountain; a sauna "cave" dug out in the late 1800s, 3GA588 behind Hale Bathhouse (the 1994 report on this was by NPS archeologist Charles Haecker from Santa Fe); 3GA595 in Happy Hollow; and several sets of old foundations northeast of the Ricks Estate area (for which a state site form was submitted in 1993, but which apparently did not receive a state site number). The Bull Bayou sites were recorded by Charles Baker in 1975. Except for the Hale Cave and Ral Spring, the other sites were recorded by Hot Springs National Park ranger Mark Blaeuer in 1993.

An estimated minimum of ten or twenty sites may rest undiscovered in the park (this figure was submitted to Henry Day at the NPS Santa Fe office in November, 1994, when an estimate was last requested). Bathhouse Row--beneath the hundreds of tons of fill dirt hauled in for landscaping and construction over the years--could be one focus for historical archeological research, keeping in mind that repeated construction there over the past 200 years may have disturbed the context for Native American finds. Several seasonal occupation sites (Native American) may be buried under sediments along watersheds in the park, such as Bull Bayou and Gulpha Creek. In the uplands, more novaculite quarry sites may exist than are presently recorded. Old domestic/commercial sites may comprise an archeological resource category as yet fully unstudied. Historic cemeteries and evidence of their associated communities also exist within the park's current boundaries; one is alleged by "town historians" to be a Civil War skirmish site, and another is believed to be African-American. Large-scale documentary research might reveal locations of several historic sites, given the huge document base preserved in park and other archives; see the "Historic Base Map" project statement for more details about this. This is not to imply that deeply hidden sites should necessarily be the focus of an intensive search, unless development or vandalism threatens them; invisibility often works in favor of preservation. Finally, other sites are known within the park which have never been formally recorded. No site for which the state has not assigned a site number has been entered into the RMP charts.

No recorded archeological sites in the park are on the National Register of Historic Places (Bathhouse Row, a historic district, is a National Historic Landmark). Only one archeological site has been evaluated, the Indian Mountain novaculite quarry complex, 3GA22. The park submitted a 30-page National Register nomination in 1995 on this, but it was not approved. A substantial boundary survey (as well as other work) would be required, and an administrative problem is that it straddles the park's eastern boundary. An archeological problem is that most novaculite quarries, including 3GA22, lack diagnostics. Furthermore, novaculite artifacts recovered from such datable archeological contexts as Poverty Point cannot be traced to a particular quarry, given the imprecision of geological "fingerprinting" methods. Most archaeologists in the state maintain that 3GA22 is eligible at the state/regional level of significance, primarily due to its rich associations with investigators like Dr. William Henry Holmes, a pioneer in American aboriginal lithic technology; therefore, it is

categorized in the appended chart as "not evaluated." A sizable section of the site also preserves evidence of historic whetstone mining, which Arkansas State Historic Preservation Office archeologist George McCluskey has said merits serious study also. In fact the park has so many aboriginal and whetstone quarries, that the question of nominating one or more quarry districts should be addressed. Prehistoric quarries are found throughout the Novaculite Uplift region of the southern Ouachita Mountains, including many near-pristine sites in the adjacent Ouachita National Forest. However, the distribution of novaculite whetstone quarries is much more limited, and the park's extensive whetstone quarries apparently constitute the vast majority of those not in active use--thus preserving evidence of 19th and early 20th century extraction techniques. Quarry sites in the park (consisting sometimes of both prehistoric and historic remains) also include 3GA45 (on Music Mountain), 3GA565 (on Sugarloaf Mountain), 3GA586 (on North Mountain), and 3GA587 (on West Mountain). 3GA22 and 3GA586 contain the most extensive whetstone pitting. 3GA22 has been known for years and was recorded by the Arkansas Archeological Survey in 1969, soon after that organization was formed. 3GA45 was recorded by Charles Baker in 1975. The others were recorded by Mark Blaeuer in 1993 and 1994.

Status of Structures:

Hot Springs National Park has 46 classified structures (which actually represent at least 52 individual structures) within its boundaries, but only nine--eight bathhouses and the administration building--are evaluated specifically as having national significance. These nine structures form the core of the National Historic Landmark District, which includes eight additional classified structures: the Formal Entrance, the men's and women's comfort stations on Bathhouse Row, Maurice historic spring area, the Noble Fountain by the Reserve Street Grand Promenade entrance, the Grand Promenade itself, and the two fountains in front of the administration building.

The administration building and six of the eight historic bathhouses on Bathhouse Row have had technical reports filed detailing their condition as of the mid to late 1980s; all the bathhouses were included in the 1973 *Historic Structures Report* by Cromwell *et al.* Asbestos has been removed from all affected structures in the Historic Landmark District. The administration building and the two Bathhouse Row comfort stations have been completely renovated in the past four years; they have good documentation and are in good condition with a low impact level. Four of the bathhouses--the Buckstaff, the Fordyce, the Superior, and the Hale--are in good condition with a low impact level. As the sole bathhouse in continuous operation since its opening, Buckstaff Bathhouse has always been maintained in good condition. It has fair documentation. Fordyce Bathhouse was restored for adaptive use in the 1980s and opened as a visitor center in 1989. Although it is currently in good condition, it needs constant maintenance. The Superior and Hale have been stabilized for leasing, and the lead paint has been removed from their premises. The Lamar Bathhouse is in poor condition, as are the Ozark and Quapaw Bathhouses; all three have good documentation. Lamar Bathhouse must have its interior lead paint removed, but the procedure will be complicated by the necessity of conserving rather

than removing the extensive painted murals in the lobby. Quapaw Bathhouse is receiving some much-needed attention; its roof, dome, and cupola have recently been restored, and removal of lead paint in the building's interior is underway. Stained glass skylights have been removed and stored to prevent their further deterioration. Ozark Bathhouse requires the removal of interior lead paint, along with exterior wall, window casing, exterior walls and roof repairs. The Maurice Bathhouse has good documentation but is in poor condition with a severe impact level. Deterioration has recently caused the collapse of part of one stairway. This bathhouse, which is in the poorest condition of all the structures, has had a badly leaking roof for several years, but the old roof has now been removed, and a new one is being added. Eventually lead paint will also have to be removed from its interior, but stabilizing the structure should be given a higher priority.

Stevens Balustrade is in poor condition; the Formal Entrance and the Grand Promenade are in fair condition. All three have good documentation; impact is moderate for all three. The Maurice historic spring area has good documentation and is in good condition, as are the Noble Fountain, the ornamental fountain in front of the administration building, and the jug fountain on Reserve Street. All three fountains have good documentation. The fountains and Maurice historic spring area all have a low impact.

The former medical director's residence, one of the oldest buildings in the park, has not been nominated to the National Register of Historic Places but has been identified as eligible for the National Register by the State Preservation Office. It is, however, being offered for lease. It is in poor condition, and the impact level is severe. Among other problems, a leaking roof over the living room has caused the floor to rot, and glass shards from damaged windows have fallen in the past, endangering passersby. Lead paint is also flaking from the walls and litters the hardwood floors. The residence's garage is no longer being used for storage; its condition is poor and ground water frequently floods the floor; its documentation is poor.

Classified stonework structures such as retaining walls, trail shelters, road and trail riprapping, the brick "arch" (actually an old reservoir) behind Superior Bathhouse, and NPS owned structures on the Ricks Estate may need to be rebuilt or at least stabilized. Impact level on all of these structures is unknown, and documentation is poor. The Maintenance Division reports the Hot Springs Mountain Drive stonework and the riprapping along Whittington Creek to be in poor condition; some of the trail shelters have been recently reworked, but others still need attention. The brick reservoir is also in poor condition. NPS owned structures on the Ricks Estate structures are in unknown condition at this time; however, architectural historians at the University of Arkansas are currently at work on a National Register nomination for the entire estate. One Ricks Estate structure on the List of Classified Structures, the Ricks boathouse, collapsed and was removed in 1995, immediately after Level III documentation was carried out by Ouachita National Forest archaeologists on behalf of the park.

Other structures included on the LCS include the buildings in the Whittington maintenance complex, east and west duplexes and garages, West Mountain shelter house, West Mountain Drive, North Mountain pagoda shelter, Oertel trail system, a stone tank house on Hot Springs Mountain, and Gulpha Gorge ranger's residence, stone walls, and low water crossing. Documentation is poor on all of these structures, but former Denver Service Center architectural historian Laura Soulliere was of the opinion that many of these structures would be National Register eligible under a multiple property nomination. Condition and impacts are unknown.

A number of structures need to be added to the List of Classified Structures; these include the Hale hot cave, native stone features such as overlooks and retaining walls on North and West Mountains, native stone features such as spring catchments, bridges, and retaining walls on numerous trails, the walls along Reserve Street terminating at the medical director's former residence, and such Gulpha Gorge features as the retaining walls on Gulpha Gorge Road and Creek, the remains of the dam and bridges in the campground, and the visitor contact center. They have poor documentation, and their condition and impacts are unknown.

Status of Objects:

The park's curatorial collection of 224,268 catalogued and approximately 190,000 uncatalogued objects includes archival, historical, archeological, geological, biological, and paleontological items. The bulk of the collection is archival, consisting of some 206,388 catalogued objects. Catalog records are also on file for 13,627 historical objects, 409 archeological artifacts, 195 geological samples, 3642 biological specimens, and 7 paleontological specimens. Approximately 45.4% of the collection is still uncatalogued and cannot yet be assigned a condition code; 1.8% of objects in the accessioned collection are in excellent condition, 27.2% in good condition, 24.6% in fair condition, and 1% in poor condition. The objects within each category also follow this pattern, with the exception of paleontology; 71% of this sparsely represented group is in excellent condition, and the rest of the objects are in good condition. As these statistics show, at least a quarter of the objects (and possibly double that number, since many of the uncatalogued objects are in poorer condition than the catalogued ones) may need at least minor conservation. A Collections Condition Survey is needed to evaluate and prioritize the objects for conservation treatment.

All small and medium-sized objects have been placed in customized non-acidic cardboard containers over the last four years. The smallest objects are kept in museum storage cabinets that generally meet National Park Service standards, although a half dozen of the smaller cases lack working locks. Seven map cases hold the entire catalogued map and drawing collection. Documentary, archival, and photographic collections have been rehoused in lignin-free, acid-free, or buffered cardboard storage containers as appropriate and are stored on archival steel shelving units. A few collection objects still stored in the old medical director's

residence need to be rehoused; they are discussed in more detail below.

Objects are held in two dedicated storage areas (one on the second floor of Fordyce Bathhouse, and the other a Bally building behind the ranger headquarters on Reserve Street) and several nondedicated areas. None of the latter meet National Park Service curatorial standards for control of environment, access, fire, or theft. Probably the most notable deficiency in the area of environmental control involves the valuable art glass collection (72 panels) removed from the Maurice Bathhouse in the 1970s and stored uncleaned in acidic plywood containers in the damp basement of the former medical director's residence, which no longer has climate control, fire protection, or control over access by unauthorized personnel. One deteriorating box was removed and its contents placed in an oversize map case in 1995, but the rest of the cases remain where they were placed. A few historic objects and many large geological and archeological specimens are also stored in this building. Eighty archival boxes of catalogued and uncatalogued archival materials are in a former Fordyce Bathhouse stateroom that lacks adequate climate control; the room is locked, but access by unauthorized personnel cannot be controlled. The museum technician's office has become an ad hoc storage area overflowing with items awaiting cataloguing and storage; it functions as a work area as well as an office, but not surprisingly it is too crowded to be very effective in any of those capacities. Because it houses the thermostat for part of the bathhouse, its door must remain open even when the museum technician is away; access is therefore completely uncontrolled.

Environmental stability is also lacking in the exhibit cases; they have no separate controls and must conform to the ambient temperature and humidity. Because control of these factors is inadequate throughout the Fordyce Bathhouse, the nearly 1400 objects in cases and in historically furnished rooms are subject to minor temperature fluctuations and major rapid changes in relative humidity. Electronic dataloggers are used to monitor temperature and relative humidity on all three floors of the Fordyce Bathhouse and in the permanent storage areas, but not in the temporary storage areas.

The temporary storage areas and the Bally building have no fire protection. The permanent storage area in Fordyce Bathhouse has a halon fire suppression system which may be phased out soon. An Integrated Pest Management (IPM) monitoring program is in place and covers most of the furnished rooms.

All of the park's catalog records have been entered into the Automated National Catalog System. The number of catalog records has tripled in size in the last five years, but a backlog of approximately 190,000 accessioned objects still awaits cataloguing. An additional undetermined quantity of archival and other materials needs to be evaluated for possible accessioning, which will add to the cataloguing backlog. The backlog exists in these categories: archeological (approximately 302 objects), archival (approximately 165,000 objects), historical (approximately 25,000 objects), and biological (approximately 30 objects).

Status of Archival and Manuscript Collections:

By far the largest number of accessioned objects in the collection are in this group. Several archives have been catalogued to date. The Hot Springs National Park Administrative Archives consists of the administrative records of the park from 1878 to 1990. This entire archival collection has been microfiched, and a finding aid is on file for approximately half of it. The original filing order has been preserved.

The William H. Deaderick Documentary Collection is a scrapbook and accompanying materials on drumming from the library of William Deaderick, a former member of the Board of Registered Physicians. This collection has a finding aid, but it has not yet been microfiched.

The Hot Springs National Park Photographic Collection includes stereographs, glass negatives, film negatives, lantern slide transparencies, slide transparencies, mylar transparencies, black and white photographs, color photographs, and photographic postcards. The finding aid on this collection was begun in 1993 and is continuously being updated to include newly accessioned items. The photographic images are gradually being scanned into Corel PhotoPaint for reference by researchers. The archives contains a number of photodocumentary collections:

- * The Historic American Buildings Survey Photodocumentary Collection
- * Photodocumentation of the Restoration of the Fordyce Marquee
- * Photodocumentation of the Creek Arch, administration building weirs, removal of Army-Navy Hospital building no. eight
- * The Hamilton Report (photographic portion)
- * Hot Springs Bathhouse Employees Archival Collection (photographic portion)

The latter also includes oral history tapes; a few have been transcribed, and some have been copied onto audio cassette tapes, but no finding aid has been completed.

The Hot Springs National Park Bathhouse Collection is repositied at the University of Arkansas at Fayetteville. Microfiche for this collection is on file, along with a finding aid written by special collections staff.

The Hot Springs National Park Map, Drawing, and Specifications Archives contains documents spanning some 125 years. Objects in this collection have been microfilmed or microfiched as appropriate, and a comprehensive finding aid (including a detailed subject index) has been written for it. Building specifications are a new addition to the aid, which was initially completed in 1995 and updated in 1996.

Most of the papers left by former bathhouse owner John Rison Fordyce have been scattered throughout the Fordyce family. Some have found their way to the park, piecemeal fashion, and have been catalogued as three separate archives over the years.

- * The John Rison Fordyce Papers, 1880...(1925-1931)...1935, Fordyce papers sent several years ago to the University of Arkansas Special Collections for

processing and storage. The collection has a finding aid written by special collections staff members; it will be microfiched in the near future.

- * John Rison Fordyce Papers, 1907-1912, a collection discovered and processed at the park in 1996. This collection has been microfiched, and a finding aid is on file for it.
- * John Rison Fordyce Papers, 1925-1931, another collection recently unearthed at the park. It has been catalogued, arranged, and placed into acid-free folders, but it requires an inventory, microfiche, and a finding aid.

Microfiche of a fourth private collection of Fordyce papers is on file; the park is attempting to obtain microfilm of the other Fordyce collection(s?) at the University of Arkansas Special Collections. Other papers belonging to these archives may be found among the uncatalogued objects. Collections in such institutions as Washington University in St. Louis and Northwest Louisiana State University are also known to include Fordyce papers which might be available on microfilm.

Numerous documents acquired and catalogued as manuscripts have been included in finding aids and indexes to aid researchers in accessing them. The Hot Springs National Park Brochure Collection consists of brochures, menus, articles, and promotional items listed in a finding aid arranged by subject and chronologically within each subject; most of the items have been copied onto microfiche. Park reports are also being copied onto microfiche and included in a simple finding aid. A rudimentary finding aid for postcards is underway, and the postcard images will eventually be scanned into Corel PhotoPaint for access by researchers.

Some of the archival and manuscript collections not yet catalogued include notes and papers of several researchers, bathhouse employee personnel records (non-NPS), and Buckstaff Bathhouse archives (only a portion). Because of the new NPS policies and guidelines on archival and manuscript collections recently issued in Washington, a survey and evaluation of all the park's holdings, including those already accessioned, should be carried out as time and funding permit. Methods of processing these objects must be reviewed and revised to conform with the new standards. Archives, manuscripts, and manuscript collections make up nearly 90% of the Hot Springs Collections.

Status of Cultural Landscapes:

In early 1996, Sherda K. Williams and Marla McEnaney (of the Cultural Landscapes Inventory Division at the NPS Midwest Regional Office in Omaha) visited Hot Springs National Park, examining the park and conferring with staff. In Phase I of their Cultural Landscapes Inventory for the park, Williams and McEnaney defined the following component landscapes as having potential to be significant on their own or contribute to a larger landscape:

1. Bathhouse Row and Grand Promenade
2. Hot Springs and North Mountains, including the Oertel Trail System

3. The Hot Springs Rehabilitation Center (former Army-Navy Hospital) area, the majority of which is not NPS-owned or under NPS control; the NPS-owned sections are the duplexes dating from the 1930s and the Army-Navy Gate
4. Libbey Memorial Physical Medicine Center (former Government Free Bathhouse) and Medical Director's Residence
5. Gulpha Gorge Campground
6. The Ricks Estate, much of which is not NPS-owned or under NPS control; the NPS-owned section is the Ricks Pond and Stonebridge area
7. West Mountain (the older sections)
8. The Whittington section of the park
9. Quarry/mining resources (archeological)
10. Maintenance Area (built with Civilian Conservation Corps help)

All the above components fall into the historic designed landscape or historic vernacular landscape categories, or some combination of the two.

Park areas evaluated for significance through the National Register process are Bathhouse Row (a National Historic Landmark District since 1987) and the Indian Mountain novaculite quarry area (disapproved, 1995). As discussed at greater length in the archeology section, most experts continue to feel the latter resource is eligible; however, the "quarry/mining resources" cultural landscape category includes not only Indian Mountain but the total number of quarry areas in the park. The National Historic Landmark District of Bathhouse Row includes eight historic bathhouses, the administration building, the Bathhouse Row comfort stations, two fountains in front of the administration building, the Maurice spring pavilion, the Noble fountain at the Grand Promenade entrance on Reserve, the Grand Promenade, and the Formal Entrance. The Grand Promenade was designated a National Recreation Trail in 1982.

A Landscape Management Plan for Bathhouse Row was completed in 1989. It included treatment recommendations for Bathhouse Row and the Grand Promenade.

Status of Ethnographic Resources

Hot Springs National Park contains no ethnographic resources, as NPS guidelines currently define them. A few primary historical sources of poor documentary quality indicate that some Native American groups considered the hot springs to be of sacred medicinal value during the 1700s and 1800s. However, these groups were not

well identified as to tribal affiliation; they could have represented any or all of several tribes that were native to the area historically or whose remnants passed through Arkansas during periods of tribal territorial disintegration in the face of American westward expansion. Descendants of most of these groups now reside in Oklahoma.

The park has not inquired about this matter among tribes whose presence was documented in Arkansas during the 1700s and 1800s. No members of any contemporary Native American group have approached the park about the hot springs. During NAGPRA negotiations in 1996, the two participant tribes (Caddo and Quapaw) did not mention any sacred sites within the park. The negotiations centered on objects collected outside of the park, most of which could be assigned no particular tribal "signature" by NPS-accepted experts. None of the items could be considered funerary objects by NAGPRA standards. During the early 1900s, after a zinc and lead mining boom in Oklahoma led to brief prosperity among several tribes, some Native Americans drove to Hot Springs to take the European-style baths in the same manner as other bathers.

Although many people of diverse ethnic backgrounds have come to Hot Springs for the baths and the spa atmosphere, and to live and work here, there is no evidence to suggest that any of these groups consider any park resources to be critical in defining their cultural identity. The park has conducted oral history interviews with many former bathhouse employees, some of African-American ancestry. The bathhouses were of great local economic significance for this group as a major source of employment since the late 1860s, but the resource cannot of course be considered critical in defining the African-American cultural identity in general.

The latter statement also holds true for the Caddo people, some of whose ancestors lived in this general area at the time of first historic contact. To date, no archeological evidence (historic or prehistoric) has been found to tie this culture specifically to the hot springs or any other area within park boundaries. A few archeological sites found in the park may be Fourche Maline (ca. 1000 B.C. to 800 A.D.), which some archaeologists believe developed in place into Caddoan culture.

The park's aboriginal novaculite quarries presumably had economic significance for tribally non-identifiable Native American groups. Archaeologists believe that aboriginal use of this resource peaked in the prehistoric Archaic Period. No members of any contemporary Native American tribe have approached the park about novaculite or any other natural resource in the park.

As part of an Ethnographic Needs Assessment, park personnel sent a document on this topic to Michelle Watson at the Midwest Archeological Center in mid 1995.

CULTURAL CONTEXT/THEMES

Significance:

The area now known as Hot Springs National Park was set aside in 1832 to preserve its numerous thermal and cold water springs. Given its designation in 1921 as a national park, it may well be the earliest expression of the concept of setting aside park areas for the benefit of society as a whole. Because of the background of U.S. Government involvement in its development and of numerous independent bathhouse operations characterizing its history, Hot Springs National Park is a unique example of the American spa movement, a value that was recognized in 1987 when Bathhouse Row was designated a National Historic Landmark District. The unusual combination at Springs Reservation/National Park of therapeutic bathing regimens, related medical treatments, and relaxation in natural surroundings has resulted in a blending of landscaped spaces, architectural design, and natural areas that is unique to this national park.

Hot Springs National Park also contains a large portion of a system of prehistoric novaculite quarries that is among the most extensive in North America and that played a major role in Native American tool-making and the historic whetstone industry. As a cultural crossroads, the Hot Springs area enjoys a rich body of history and lore brought about by the importance of the African-American community in the bathing industry, the legacy of Spanish and French colonialism in the region, the lure of the area's geological resources for Native American and other ethnic groups, and the vicissitudes of daily life during and after the turbulent American Civil War period.

The summary of available written information on the cultural resources and the present investigation of this area of Arkansas indicates that while there are presently gaps in the record, there can be little doubt that the total sequence of prehistoric occupation will be found, if not in the park itself, at least in the immediate local area. The Paleo period (*circa* 12000 to 8000 B.C.) is not represented in this area's recorded sites or collections at the present time, but the characteristic fluted points have been found farther south in Arkansas along the Ouachita River, and on tributaries of the Red River in southwest Arkansas. Some late Paleo or very early Archaic novaculite projectile points have been found in the southwest part of the state. Thus, there can be little doubt that Native Americans knew of this lithic source soon after their arrival in the area and made immediate use of it for their tools. Evidence of this will undoubtedly be uncovered as more scientific investigations are completed.

Ample evidence exists of Native American occupation of the area during the Archaic period (8000 B.C. to 1000 B.C.). As hunters and gatherers, they undoubtedly found the mountains an abundant source of game and fish, as well as wild plants. Further exploitation of the novaculite is evidenced through stone tools of this time period being found farther and farther away from this source area. Southern Louisiana, and the famous Poverty Point site in northeast Louisiana are but two areas where Archaic tools of novaculite have been removed. Schambach's study at the Means and Cooper sites indicates a sizable permanent population in the area making maximum use of the environment (Schambach 1970). The sites found along Bull Bayou provide direct evidence of Native Americans in the park area during this time period (Baker

1975).

The early pottery-making and horticultural Woodland communities known locally as the Fourche Maline culture readily took to the ideas of agriculture and pottery-making introduced into the area. These "pre-Caddoan" cultures also made use of the novaculite lithic material for tools.

The few large, late prehistoric sites which have been excavated in the immediate area indicate that after about A.D. 1000 there were large Caddoan populations in the area, whose subsistence base was agriculture, who had a sophisticated social and religious system, and whose technology, particularly in pottery-making, was excellent. These large villages seem to be away from the hot springs themselves (unless one or more were destroyed in the central city development), but it is possible that hamlets and quarrying stations will be found to aid in interpretation of the way of life of the period.

According to local tradition, the first European to view the hot springs was Hernando de Soto, who explored the region of central Arkansas during 1541, but no documented evidence exists to substantiate that claim. A majority of scholars now argue against reconstructions of his route that include Hot Springs (Young and Hoffman 1993). In any case, in succeeding years the region was claimed at different times by both France and Spain until 1803, when France sold her land claims west of the Mississippi River in the transaction known as the Louisiana Purchase. The first Americans to formally explore the Arkansas hot springs region were William Dunbar and Dr. George Hunter. The fifteen-man party explored the Ouachita River and camped within the present boundaries of Hot Springs National Park in December, 1804. At the springs themselves they found "an Open Log Cabin and a few huts of split boards," all of which had been "calculated for summer encampment and which had been erected by persons resorting to the springs for the recovery of their health" (McDermott 1963). Two or three years after the Dunbar-Hunter Expedition, other Americans began to move into the area around the springs and build permanent residences.

The first permanent settlers to reach the hot springs area were quick to realize the springs' potential as a health resort; they built log structures to meet the basic needs of visitors to the springs. The first bathhouse was erected in 1830 and contained one wooden tub in which one could bathe three times for a dollar. A store was in place by the 1830s. The government, recognizing the springs' significant therapeutic value within the contemporary medical milieu, stepped in to protect them as a unique national resource, and four sections of land around the springs were set aside as a federal reservation by an Act of the Twenty-Second Congress of the United States approved by President Andrew Jackson on April 20, 1832. The act stipulated that "the Hot Springs and every other salt spring 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 it shall not be liable to be entered, located, or appropriated for any other purpose whatever."

When the federal presence was not concomitantly established, settlers who were already in the area felt justified in their continued occupation of the land and establishment of bathhouses around the springs. Two years later when United States Geologist G.W. Featherstonhaugh visited the springs in 1834 he found a very primitive settlement which consisted of several "wretched looking log cabins, in one of which was a small store," but by 1856 Hot Springs could boast of a resident physician and seven bathhouses. These were either built directly over springs or were equipped with thermal water tanks fed by wooden troughs. By mixing waters from springs of different temperatures or by cooling it in tanks, operators could regulate the heat of the bathing water.

As news of the reputed medicinal powers of the waters continued to spread, numerous health-seekers migrated to the spring area. By the mid 1800s, the springs were being claimed by several private citizens; in 1875, the government was forced to reconfirm its jurisdiction over the area in the Court of Claims. In 1877, after the court had ruled against the would-be private owners, the Hot Springs Commission was authorized to reestablish the boundaries of the reservation in a U.S. House of Representatives bill granting a right-of-way to the Hot Springs Railroad Company. In the same year a superintendent was appointed. The springs and surrounding mountains were again designated as Hot Springs Reservation, surveys were made, remaining claims were settled, and the balance of the original reservation was laid out into streets and lots for development.

After the hot springs and their environs were reestablished as government property, the area rapidly changed from a rough frontier town to an elegant spa city, with building, landscaping, and engineering projects proceeding apace. By 1878 Hot Springs had a permanent population of more than 3,500 and a bustling annual visitation of around 50,000. In 1884 the government enclosed Hot Springs creek in an underground masonry arch for flood and sewerage control, enabling bathhouses to be constructed along the former creek bed. The area was landscaped to create a pleasing, tree-lined park. Although now regulated by the superintendent of the reservation, privately owned bathhouses remained an integral feature of the spring area, and each new generation of buildings was larger and more luxurious than the previous one. In 1891 the indigent were also more comfortably accommodated by a brick government bathhouse providing free services to those who could not afford the private bathhouses.

In 1892 the government authorized funding for landscaping improvements to the reservation, and Secretary of the Interior John W. Noble placed Lt. Robert R. Stevens of the War Department in charge of the project. Lt. Stevens spent several years overseeing improvements to the reservation, including a grand entrance, fountains, mountain roads, a lake park on Whittington Avenue, and graded paths. Stevens's work was completed in 1898, just in time for the new influx of visitors brought in by Colonel Sam Fordyce's railroad line, finished in 1899.

When the National Park Service was created in 1916, administration of the reservation was transferred to the new organization. Hot Springs Reservation became Hot Springs National Park in 1921 by an Act of Congress "Making appropriations for sundry civil expenses of the government for the fiscal year ending June 30, 1922, and for other purposes," approved March 4, 1921. One of the "other purposes" included the stipulation that "Hot Springs Reservation shall be known as the Hot Springs National Park." This redesignation would have occurred soon after the establishment of the National Park Service, but at that time an Arkansas Congressman objected to the park's considerable revenues going into the federal treasury.

By the first decade of the new century, the wooden Victorian bathhouses built in the 1880s were rapidly decaying from the moisture continuously permeating them; their wood frame construction also made them vulnerable to fire. The years between 1912 and 1922 saw another spate of construction as these outmoded buildings were replaced by fire-resistant brick and stucco bathhouses, some featuring marble walls, billiard rooms, gymnasiums, and stained glass windows. In 1922, a new government free bathhouse and genito-urinary clinic opened for business. In 1923 the last major change to Bathhouse Row occurred when fire destroyed the Arlington Hotel at its north end. The hotel was rebuilt on the other side of Fountain Street, and the vacant lot was never again to be a bathhouse site. By 1933 the original red-brick Army-Navy Hospital towering above the south end of Bathhouse Row had been replaced by the large yellow-brick complex that still occupies the site today as a rehabilitation facility.

The 1930s also brought other large construction projects. With the Public Works Administration in full swing, funds and manpower were allocated for several civil engineering projects at the park and on adjoining city land. Projects included new sewage disposal systems both in the city and at the park's Gulpha Gorge campground, reconstruction and paving of the West Mountain road system, trail work, and grading for a formal promenade behind the bathhouses. New buildings were also constructed: a park utilities complex, a park administration building, and a variety of buildings at the campground. The Civilian Conservation Corps also played a role in some of this work, particularly in road and trail construction.

By the late 1940s, breakthroughs in medical science and the decline of the railroads had led to a decrease in bathhouse business. Oddly enough, the decline of Bathhouse Row business actually created new bathhouse construction off park boundaries in the 1950s as the park sought applicants for use of the surplus thermal water. But this flurry of activity only precipitated a more rapid decline in the bathing industry, and the elegant Fordyce Bathhouse became the first casualty when it closed its doors in 1962. Other Bathhouse Row and hotel bathhouses followed suit during the next twenty years. Today Buckstaff Bathhouse is the only building on Bathhouse Row still operating as a bathhouse. The Fordyce Bathhouse has been renovated as the park visitor center and museum, and the other historic bathhouses, acquired by the National Park Service as they closed, are being offered for adaptive use leasing. Four hotels still operate bathhouses, and the former Government Free

Bathhouse now operates as a thermal water health spa. The Leo N. Levi Hospital uses the thermal water in its hydrotherapy pool and treatment center.

The park boundaries have also undergone numerous changes since the original 2,529.1 acres were reserved in 1832. This acreage was greatly reduced in the 1877 resurvey of the reservation which resulted in the setting aside of only 264.93 acres immediately surrounding the springs. However, an 1880 Act of Congress increased the acreage to 900.63, taking in the surrounding North, West, Sugar Loaf, and East (Hot Springs) Mountains. Whittington Park area was added in 1896, bringing the total area to 911.63 acres. In 1925, the 16 acres encompassing the Gulpha Gorge campground were donated to the park. A resurvey of the park's boundaries, the first since 1877, was made by the U.S. General Land Office in 1932. In 1935 the park accepted the donation of 63.2 acres of land on Indian Mountain by Colonel John R. Fordyce; the parcel included both prehistoric and historic novaculite quarries. The most dramatic change came in 1938, when Act of Congress H.R. 5763 extended the boundaries by 4,763 acres to connect the discontinuous mountainous areas, to include other parcels adjoining Fountain Street and Whittington Avenue, and to allow for two new entrances to West Mountain. Resulting land acquisitions continued through 1941.

In 1944, 32 acres used for the U. S. Public Health Service's transient camp were deeded to the park; upon closing of the camp, the land was transferred to the Hot Springs School District No. 6 and the Garland County Health Unit (should it ever be abandoned, its ownership will revert to the National Park Service). In 1959 5.3 acres of park land behind the Arlington Hotel were exchanged for a 4.75 acre inholding near the entrance that included Happy Hollow Spring on Fountain Street.

In the 1970s the park used available funds to secure various inholdings adjacent to trails, within the "recharge areas" for the thermal springs, or for other purposes: 1,314 acres were added at the end of 1972; 883 acres were acquired in 1973. Further land acquisitions in 1974-75, including a 240-acre tract donated by Weyerhaeuser Company, brought the park's size to 4,379.81 acres; acquisitions in 1977 increased it to 4,465.04 acres, and an additional 98.43 acres were acquired in 1979. Acquisitions continued through the 1980s and 1990's. The latest boundary change, authorized in 1993, has again reduced the park's boundaries (by 300 acres) but certain key inholdings are still being actively sought.

Themes:

The parks' cultural resources represent the following contexts and themes as listed in Revision of the National Park Service's Thematic Framework (1996):

I. PEOPLING PLACES: 1. HEALTH, NUTRITION AND DISEASE. The park's formal walks, trails, fountains, thermal water distribution systems, and bathhouses were all developed to provide a healthy regimen for invalids and non-invalids alike who came (and still come) to bathe and drink the thermal water. Therapeutic baths in the

bathhouses were taken in conjunction with appropriate exercise and the consumption of plenty of thermal water.

II. CREATING SOCIAL INSTITUTIONS AND MOVEMENTS: 4. RECREATIONAL ACTIVITIES. Hot Springs National Park was a rapidly evolving expression of cultural attitudes towards health and fitness that culminated in the American Spa movement. The park's role in this movement was a unique one, because it represented the only spa that was owned by the government from its beginning. The Government Free Bathhouse, the administration building, and such landscaping features as fountains, drives, trails, pavilions, and formal walks and gardens directly resulted from this government involvement.

III. EXPRESSING CULTURAL VALUES: 2. VISUAL ARTS. The bathhouses all incorporated contemporary visual arts movements and influences into their construction. The lobby and exterior of Lamar Bathhouse exhibit art deco touches. Maurice Bathhouse borrowed from the arts and crafts movement with its mission oak furnishings and Roycroft den. Bathhouse exteriors reflected the Classical, Spanish, and Mediterranean influences current during their construction: Superior Bathhouse and Lamar Bathhouse in eclectic commercial adaptations of the Classic Revival style, Hale Bathhouse in the Mission style, Quapaw and Ozark Bathhouses in the Spanish Colonial Revival style, Maurice Bathhouse in a mix of Renaissance Revival and Mediterranean styles, Fordyce Bathhouse in the Renaissance Revival style with both Spanish and Italian elements, and Buckstaff Bathhouse in the Neo-Classical Revival style. The lavish use of marble and terra cotta in walls, stairs, and statuary, and of art glass in skylights featuring mythical and woodland scenes contributed to the general opulence of some bathhouse interiors, particularly that of the Fordyce Bathhouse.

5. ARCHITECTURE, LANDSCAPE ARCHITECTURE, AND URBAN DESIGN. In 1892, Secretary of the Interior John Noble wrote to Lt. Robert Stevens and urged him to prepare a plan for improving the area with parks, formal walks, an observatory, and pavilions. In his reply, Stevens suggested that the services of Frederick Law Olmsted be retained for the project. Although this arrangement ultimately fell through, it was to be only the first of several ambitious architectural and landscaping projects envisaged for the park. Aesthetic enjoyment, hardly even a consideration in the early days of the hot springs, had gradually attained nearly equal footing with the therapeutic regimens offered at the bathhouses. Brochures written to promote various bathhouses in the early part of the century support this concept, with phrases like, "a monument to health and beauty," "The Maurice...the Bath House Beautiful," and "The Nation's Health and Pleasure Resort." The spa experience at Hot Springs now endeavored to soothe the spirit as well as to heal the body, and the architecture of the bathhouses, their interior decor, the Grand Promenade, and the landscape features all reflected their aesthetic milieu. Architectural objects in the collection, particularly the beautiful art glass and other elements removed from the Maurice Bathhouse, also embodied this new philosophy.

IV. SHAPING THE POLITICAL LANDSCAPE: 2. GOVERNMENTAL INSTITUTIONS. In

1877 Superintendent Benjamin Kelley, the first superintendent of Hot Springs Reservation, had the rough wooden bathing pavilions that provided free bathing to the indigent torn down. A riot ensued; Kelley, threatened with hanging, was forced to call in federal troops to calm the populace. Shortly thereafter, a wooden government free bathhouse was established on one of the sites. The strong subtheme of the people's right to life, liberty, and the pursuit of happiness set forth in the American Declaration of Independence runs throughout the history of Hot Springs National Park and is exemplified in the public bathhouse, fountains, drives, trails, and pavilions. Ever since the reservation was established, the thermal spring water has been available to men and women of all races, nationalities, and economic backgrounds.

VI. EXPANDING SCIENCE AND TECHNOLOGY

2. *TECHNOLOGICAL APPLICATIONS.* The prehistoric and historic quarries that dot the mountainsides in Hot Springs National Park have left behind a record of the various technologies brought to bear on novaculite outcroppings through the centuries. Native Americans used the stone extensively in tool-making; European settlers found it to be an excellent whetstone useful in a variety of applications.

3. *SCIENTIFIC THOUGHT AND THEORY.* Objects such as vibrating massage instruments, vacuum electrode tubes, and douche equipment in the Hot Springs National Park collections can be used to trace the evolution of hydrotherapy and electrotherapy in medical practice. Archives provide documentary evidence of changing theories within these therapeutic philosophies.

4. *EFFECTS ON LIFESTYLE AND HEALTH.* Throughout most of the history of Hot Springs National Park, antibiotics, anti-inflammatories, and other pharmaceutical treatments were unavailable. In the 1800s and during the first half of the 1900s, a course of thermal water baths was the best treatment available for rheumatism, organ complaints, skin diseases, and other chronic ailments. Venereal diseases were treated in the bathhouses with a combination of hydrotherapy and mercury rubs. Countless sufferers came to the hot springs area to improve their health, and archival evidence shows that many of them left feeling better, sometimes dramatically so. Electric baths, vibrating massage equipment, and coupon books for mercury, hydrotherapy, and electromechanotherapy treatments are just a few of the tangible reminders of past therapies preserved in the bathhouses and the park collections.

VII. TRANSFORMING THE ENVIRONMENT.

1. *MANIPULATING THE ENVIRONMENT AND ITS RESOURCES.* From the simple troughs used to transport the thermal water in the 1800s to the complex underground collection and distribution system of today, systems have constantly improved, drawing nearer to the ultimate goal of delivering the resource of thermal water to the bather with its thermal qualities and purity intact. Plans, maps, and equipment in the park collection document these efforts; the collecting and pumping system in the administration building basement, the cooling station on Arlington Lawn, and the spring boxes on the side of Hot Springs Mountain exemplify their latest expression.

2. *ADVERSE CONSEQUENCES AND STRESSES ON THE ENVIRONMENT.*

3. *PROTECTING AND PRESERVING THE ENVIRONMENT.*

Park history dramatically demonstrates the inherent tension between the use of environmental resources and the need to preserve and protect them. This tension created environmental stresses that plagued the park in the 1800s. Careless blasting, intended to increase the flow of some springs, diminished the flow of other springs and made still others disappear forever. It also destroyed most of the natural calcium carbonate formations or "tufa domes" at the spring outlets; like cave formations, these domes formed over a period of centuries, and their loss was irreplaceable. Another environmental insult was the improper disposal of sewage (bathhouses and residences were built over the creek so that their water closets emptied directly into it) which essentially created a cesspool through the center of town, particularly a problem in the summer months. A third problem was inherent in the situation of the springs on the hill; people and animals were free to foul the unprotected springs at their source. These problems were eventually all addressed by restrictions on blasting enacted in the 1880s, the completion of the Hot Springs creek arch in 1884, the covering of the springs by 1901, various sewerage projects beginning in 1924 and continuing through the present, and land purchases intended to protect the areas where rainwater enters the aquifer producing the thermal water. Documents such as reports, Congressional hearings, maps, and plans document both the problems and their solutions.

III. RESOURCE MANAGEMENT PROGRAM

OVERVIEW OF CURRENT PROGRAM AND NEEDS

This section presents brief discussions on each of the significant resource management challenges identified for the park. The park's nationally significant historic area contains many fine examples of both cultural and natural resources. The primary focus of the park's natural resource manager is the conservation of the historic values embodied in these resources. This mission requires close cooperation among park managers, resource management specialists, historians, interpreters, protection rangers, and maintenance personnel. Such cooperation is evident within this plan by the inclusion of several Integrated Project Statements.

Natural Resource Management

As is evident in the following tables and project statements, the level of funding and staffing have been inadequate to support the required efforts to implement many of the division's programs. As time and money become available, the park will proceed with developing action plans and data acquisition programs.

The lack of thorough knowledge of the park's natural resources and the inability to monitor their condition in relation to development activities, are the clearest threats to the values of the park and of highest priority in this management plan. The park will continue to seek funding to develop an inventory and monitoring program and to implement a comprehensive Geographic Information System to monitor park resources

and the dynamic conditions occurring adjacent to its boundaries.

Other projects such as "Protect Air Quality Related Values" and "Wildlife Monitoring and Protection" both require that a more complete knowledge of the park's natural resources be acquired before appropriate management actions can be taken. Currently the park lacks a complete flora and fauna inventory and abundance record. The effects of air pollution on the park's natural resources and historic structures are unknown.

"Parkwide Vegetation Management" is also a strong concern. It affects the interpretation of natural as well as cultural resources of the park. Aerial photography has been obtained and will be utilized to document vegetative conditions and trends. Other vegetation related issues are the management of exotic plants and exotic forest insects within the park. Native insects and native plants, especially in developed areas, can be management issues too. All require further resource study and monitoring.

The central issue concerning the park is establishing an inventory and monitoring program that will focus on the important natural resource projects the park has outlined, and provide a systematic way of storing, retrieving, and analyzing the data, such as the Geographic Information System (GIS).

Cultural Resources Management

As pointed out in the section on natural resources management, the level of funding and staffing are inadequate to support many of the division's federally mandated programs.

The issue of greatest cultural importance currently facing park management is halting the deterioration of the six non-operating historic bathhouses on Bathhouse Row. The Superior and Hale Bathhouses have had their exteriors rehabilitated and are stabilized for the present, but if they are not leased out soon, deterioration will probably begin anew. Quapaw Bathhouse has been recently provided with a new roof; its ornate tiled dome with copper cupola has been restored, and a park crew is removing the lead paint from its interior, all of which should improve the building's chances for ultimate leasing. The Lamar Bathhouse was the last of the bathhouses to close and is in fair condition. But with no environmental systems operating in the building, plaster is beginning to collapse, endangering the extensive trompe l'oeil murals in the lobby and the painted designs on the ceiling which represent the distinguishing interior architectural features of this bathhouse. Plans have long been on paper to use this building for park offices, but funding has not been available to date for writing specific proposals and plans for this project. In the meantime, the building continues to deteriorate. Maurice Bathhouse is in the poorest condition of all the bathhouses. Its old and persistently leaking roof has caused extensive damage throughout the structure: one step of a rusted iron and marble staircase recently collapsed; many of the building's interior wooden elements have rotted nearly away, and tile floors have buckled. The old roof has now been removed and a new roof installed, but without further stabilization, the bathhouse's once ornate interior will continue to degrade. This bathhouse is particularly important because

it and the Fordyce Bathhouse flank the century-old formal entrance to the original Hot Springs Reservation. Its removal would destroy the symmetry at the center of Bathhouse Row and spoil the architectural balance which serves to unify the dissimilar bathhouses. The loss of Maurice Bathhouse would thus have a devastating impact on the historic and architectural character of the entire Historic Landmark District of Bathhouse Row. Stevens Balustrade, a limestone architectural feature at the original park entrance which now provides access to the Grand Promenade, also anchors Bathhouse Row. Its shell fountain no longer operates. The limestone is also crumbling in several areas and needs to be replaced and stabilized.

The Fordyce Bathhouse is in the best condition of the seven non-operating bathhouses, but because it functions as the park visitor center, it requires a great deal of maintenance. Four of the other bathhouses--the Lamar, the Ozark, Quapaw, and the Maurice--are in poor condition. The building receives visitors who steal doorknobs, hardware, even antique thermostats off the walls. They have also taken exhibited objects from historically furnished rooms. The walls are very permeable, and moisture constantly loosens paint and plaster on walls and ceilings, wood trim and furnishings, and causes veneer to separate from the wooden panels of dressing and bath stalls. During past floods (which periodically occur on Central Avenue, the most recent occurring in 1990), waters entered the building's basement. This problem can recur in the future. The bathhouse's marquee has developed a leak which will be major construction to repair. The leak onto the tile porch floor constitutes a safety hazard; the leaks could eventually weaken the feature's structural integrity.

The former medical director's residence on Reserve Street is also in need of stabilization. One of the oldest buildings in the park, the stucco building boasts hardwood floors, pocket doors, numerous fireplaces, sleeping porches, and a formal entrance area. The building has been added to the park's leasing program, but in the meantime it is deteriorating. Water flows through the roof of the second floor sleeping porch into the front of the living room, which has destroyed the floor in that section of the room. Lead paint is flaking off the plaster walls, and mildew is rampant. The main roof is not leaking, but will need attention soon.

The extensive native stone walls along Hot Springs Mountain Drive have been a park feature since the 1890s. They have been repaired and reworked often in the past but are now in dire need of complete rebuilding. Some of the historic native stone shelters along the park's trail system need to be stabilized, and other very old native stone walls, culverts, and other features need to be evaluated for possible repair and rebuilding.

The Hot Springs Creek arch, a 113-year-old engineering structure under the sidewalk and front lawns of Bathhouse Row, is showing signs of aging and stress. The arch is the major means of controlling storm water along flood-prone Central Avenue as well as an historic engineering structure, and its stabilization is imperative. Federal funding formerly earmarked for determining the efficacy of a tunnel through West Mountain for flood control has been transferred to a project to renovate the creek arch. The collapse of the arch would destroy the Magnolia avenue, lawn, and sidewalk along Bathhouse

Row and could radically destabilize the bathhouse foundations as well. Furthermore, it would shut down the hotel bathhouses, since the lines delivering thermal water to those buildings are anchored to the creek arch walls. The walls along Whittington Creek funnel water from West Mountain and Whittington Park into the creek arch. Projects to stabilize the creek banks began in 1905 when the lakes in the park were drained. A concrete ditch some 200 feet long was built there in 1928, and riprapping was completed in 1943. The creek walls are now in critical need of stabilization. The thermal water distribution system has been reworked and is in good condition, but the collecting system needs to be evaluated.

In Gulpha Gorge Campground, the visitor contact station has water coming up through the floor during heavy rains. The caretaker's wood floor cabin, constructed in the 1930's (now used to house National Park Service volunteers) is in reasonably good condition, but it needs termite protection. Past termite damage is evident under the house, and termite activity will probably recur. The floor joists are rotting in some areas.

Projects addressing the servicewide issues of inadequate cultural resource documentation and monitoring programs, poor collection preservation maintenance, inadequate control of visitor impacts, and cataloging backlogs are all relevant to managing the cultural resources of Hot Springs National Park. However, since many of the cultural resources planning documents are outdated and need to be rewritten (most were filed before the reopening of Fordyce Bathhouse in 1989), it is sometimes difficult to adequately address these issues on the park level. Park collections are being brought into compliance with federally mandated standards, which demand more resources than are available.

List of Project Statements

Project statement numbers were reassigned for the update of this plan. Many statements were added or changed from the approved 1981 Plan. In addition, there is a list of newly created integrated cultural and natural resource management statements.

| <u>Project#</u> | <u>Project Statement Title</u> |
|-----------------|--------------------------------|
|-----------------|--------------------------------|

TABLES

CULTURAL RESOURCES DOCUMENTATION CHECKLIST

| TITLE | CURRENT AND APPROVED | INCOMPLETE; NEEDS REVISION OR UPDATING | NEEDED |
|---|----------------------|--|--------|
| PLANNING DOCUMENTS | | | |
| Preauthorization and Authorization | | | |
| Statement for Management (SFM) | | X | |
| Outline of Planning Requirements (OPR) | | X | |
| General Management Plan (GMP) | | X | |
| Development Concept Plan (DCP) | | X | |
| Resources Management Plan (RMP) | | X | |
| Interpretive Prospectus (IP) | | X | |
| SERVICEWIDE INVENTORIES, LISTS, CATALOGS AND REGISTERS | | | |
| Cultural Resources Management Bibliography (CRBIB) | | X | |
| Cultural Sites Inventory (CSI) | | | X |
| List of Classified Structures (LCS) | | X | |
| National Catalog of Museum Objects | | X | |
| Cultural Landscapes Inventory (CLI) | | X | |
| National Register of Historic Places | | X | |
| BASIC CULTURAL RESOURCE DOCS. | | | |
| Archeological Overview and Assessment | | | X |
| Archeological Identification Studies | | | |
| Archeological Evaluation Studies | | | |
| Rapid Ethnographic Assessment Procedures (REAP) | | | |
| Cultural Affiliation Study | | | |
| Ethnographic Landscape Study | | | |
| Ethnographic Overview & Assessment | | | |

| TITLE | CURRENT AND APPROVED | INCOMPLETE; NEEDS REVISION OR UPDATING | NEEDED |
|---|----------------------|--|--------|
| Ethnographic Oral & Life Histories | | | |
| Ethnographic Program | | | |
| Historic Resource Study | | | X |
| Historic Base Map | | | X |
| Park Administrative History | | | X |
| Scope of Collection Statement | X | | |
| SPECIAL RESOURCE STUDIES AND PLANS | | | |
| Archeological & Ethno. Collections Studies | | | |
| Archeological Data Recovery Studies | | | |
| Collection Management Plan | X | | |
| Collection Storage Plan | | X | |
| Collection Condition Survey | | | X |
| Cultural Landscape Report (CLR) | | | X |
| Ethnohistory | | | |
| Exhibit Plan | X | | |
| Historic Furnishing Report | X* | | |
| Historic Structure Report (HSR) | X | | |
| Inventory & Condition Assessment Program (ICAP) | | | X |
| Social Impact Study | | | |
| Special History Study | | | |
| Traditional Use Study | | | |

*On file for Fordyce Bathhouse only.

SUMMARY CHART FOR ARCHEOLOGICAL SITES

| Significance | | Condition | | | | | Impacts | | | | Documentation | | |
|------------------|----|-----------|------|------|-----------|---------|---------|----------|-----|---------|---------------|------|------|
| | | Good | Fair | Poor | Destroyed | Unknown | Severe | Moderate | Low | Unknown | Good | Fair | Poor |
| National | | | | | | | | | | | | | |
| State & Regional | | | | | | | | | | | | | |
| Local | | | | | | | | | | | | | |
| Not Evaluated | 16 | | | | | 16 | | | | 16 | | | 16 |
| Totals | 16 | | | | | 16 | | | | 16 | | | 16 |

SUMMARY CHART FOR STRUCTURES

| Significance | | Condition | | | | | Impacts | | | | Documentation | | |
|------------------|----|-----------|------|------|-----------|---------|---------|----------|-----|---------|---------------|------|------|
| | | Good | Fair | Poor | Destroyed | Unknown | Severe | Moderate | Low | Unknown | Good | Fair | Poor |
| National | 9 | 5 | 3 | 1 | | | 1 | 2 | 5 | 1 | 8 | 1 | |
| State & Regional | | | | | | | | | | | | | |
| Local | | | | | | | | | | | | | |
| Not Evaluated | 67 | 4 | 2 | 4 | 1 | 56 | 1 | 3 | 4 | 59 | 8 | 0 | 59 |
| Totals | 76 | 9 | 5 | 5 | 1 | 56 | 2 | 5 | 9 | 60 | 16 | 1 | 59 |

SUMMARY CHART FOR OBJECTS

| DOCUMENTATION Form 10-254 Submitted to National Catalog at Harpers Ferry | Archeology | Ethnology | History | Archives | Biology | Paleontology | Geology | TOTALS |
|--|------------|-----------|----------|-----------|---------|--------------|---------|-----------|
| Registration Data Only | | | | | | | | |
| Registration & Catalog Data | 409 | 0 | 13,627 | 206,388 | 3,642 | 7 | 195 | 224,268 |
| Total Items Catalogued | 409 | 0 | 13,627 | 206,388 | 3,642 | 7 | 195 | 224,268 |
| Backlog to be Catalogued | (302) | 0 | (24,978) | (164,692) | (27) | 0 | 0 | (190,000) |
| Total Collection Summary | (711) | 0 | (38,605) | (371,080) | (3,669) | 7 | 195 | (414,268) |

| CONDITION The percentage of collection in the following categories: | Archeology | Ethnology | History | Archives | Biology | Paleontology | Geology |
|--|------------|-----------|---------|----------|---------|--------------|---------|
| Excellent | 19.5 | 0 | 3 | 2 | 4 | 71 | 1 |
| Good | 20.0 | 0 | 21 | 27 | 83 | 29 | 80 |
| Fair | 19.5 | 0 | 11 | 26 | 11 | 0 | 16 |
| Poor | 5.0 | 0 | 1 | 1 | 1 | 0 | 3 |
| Unknown | 36.0 | 0 | 64 | 44 | 1 | 0 | 0 |

SUMMARY CHART FOR CULTURAL LANDSCAPES

| Significance | | Condition | | | | | Impacts | | | | Documentation | | |
|------------------|----|-----------|------|------|-----------|---------|---------|----------|-----|---------|---------------|------|------|
| | | Good | Fair | Poor | Destroyed | Unknown | Severe | Moderate | Low | Unknown | Good | Fair | Poor |
| National | 1 | | 1 | | | | 1 | | | | 1 | | |
| State & Regional | | | | | | | | | | | | | |
| Local | | | | | | | | | | | | | |
| Not Evaluated | 9 | | | | | 9 | | | | 9 | | | 9 |
| Totals | 10 | 0 | 1 | 0 | 0 | 9 | 1 | 0 | 0 | 9 | 1 | 0 | 9 |

SUMMARY CHART FOR ETHNOGRAPHIC RESOURCES

| Resource Types | National Register | Authority | Non-Recreational Use | Documentation Level |
|-------------------------|-------------------|-----------|----------------------|---------------------|
| Sites | 0 | NA | 0 | NA |
| Structures | 0 | NA | 0 | NA |
| Objects | 0 | NA | 0 | NA |
| Natural Resources | 0 | NA | 0 | NA |
| Ethnographic Landscapes | 0 | NA | 0 | NA |
| Other | 0 | NA | 0 | NA |

BIBLIOGRAPHY OF REFERENCES CITED

BAKER, CHARLES MICHAEL

1975 Archeological Inventory of Hot Springs National Park. Report prepared for the National Park Service, Southwest Region, by the Arkansas Archeological Survey and University of Arkansas Museum, Fayetteville.

BELL, ALONZO

1882 Report on the Hot Springs of Arkansas to the Secretary of the Interior, Washington D.C., U.S. Government Printing Office.

CRON, FREDERICK W.

1946 The Hot Springs of the Ouachita. Unpublished ms. on file in the library of Hot Springs National Park.

CROMWELL, NEYLAND, TRUEMPER, MILLETT & GATCHELL, INC.

1973 Historic Structures Report, Hot Springs National Park, Little Rock, Arkansas.

FEATHERSTONHAUGH, G.W.

1844 Excursion Through the Slave States. John Murray, London.

HARRISON, LAURA SOULLIERE

1986 Architecture in the Parks: National Historic Landmark Theme Study. U.S. Department of the Interior, National Park Service.

1991 Water, Water Everywhere: A Brief Investigation of Deterioration in the Superior, Hale, Maurice, Quapaw, and Ozark Bathhouses. Hot Springs National Park, Hot Springs, Arkansas.

HOT SPRINGS RESERVATION

1878- Reports of the Superintendent of Hot Springs Reservation to the
1921 Secretary of the Interior. Hot Springs National Park museum collections.

McDERMOTT, JOHN F.

1963 Western Journal of Dr. Geo. Hunter: Excursion up the Ouachita 1804-1805.
Trans. Am. Philosophical Society, Philadelphia, Pennsylvania.

MUSICK, THOMAS H.

1890 Investigation of Hot Springs Affairs, Report to the Secretary of the Interior.
Government Printing Office, Washington, D.C.

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

1922- Reports of the Superintendent of Hot Springs National Park to the
1966 Secretary of the Interior. Hot Springs National Park museum collections.

1977 Statement for Management, Hot Springs National Park, Hot Springs National Park Resources Management Plan for Hot Springs National Park, Hot Springs National Park

1981 Resources Management Plan for Hot Springs National Park, Hot Springs National Park

1985 Bathhouse Row Adaptive Use Program, The Bathhouse Row Landscape: Technical Report 1
Bathhouse Row Adaptive Use Program, The Superior Bathhouse: Technical Report 2.
Bathhouse Row Adaptive Use Program, The Hale Bathhouse: Technical Report 3.
Bathhouse Row Adaptive Use Program, The Maurice Bathhouse: Technical Report 4.
Bathhouse Row Adaptive Use Program, The Fordyce Bathhouse: Technical Report 5.
Bathhouse Row Adaptive Use Program, The Quapaw Bathhouse: Technical Report 6.
Bathhouse Row Adaptive Use Program, The Ozark Bathhouse: Technical Report 7.

1986 General Management Plan, Development Concept Plan, Hot Springs National Park, Hot Springs National Park

1996 Revision of the National Park Service's Thematic Framework Management Report, Hot Springs National Park. Collections

OLMSTED ASSOCIATES ARCHIVES

1892- Correspondence concerning Job #1244 for Hot Springs Reservation.
 1893 Library of Congress, "The Records of the Olmsted Associates," microfilm reel #59, container B80-B82.

PAIGE, JOHN C. AND LAURA SOULLIERE HARRISON

1988 Out of the Vapors: A Social and Architectural History of Bathhouse Row. U.S. Department of the Interior, National Park Service.

PETRAVAGE, CAROL A.

1987 Historic Furnishings Report: The Fordyce Bathhouse, Hot Springs National Park, Arkansas. U.S. Department of the Interior, National Park Service, Harpers Ferry Center, West Virginia.

ROBISON, HENRY W., AND THOMAS M. BUCHANAN

1988 Fishes of Arkansas. University of Arkansas Press, Fayetteville, Arkansas.

SABO, GEORGE III, ANN M. EARLY, JEROME C. ROSE, BARBARA A. BURNETT,
LOUIS VOGELE, JR., AND JAMES P. HARCOURT

1988 Human Adaptation in the Ozark-Ouachita Mountains. Arkansas Archeological Survey, Fayetteville.

SCHAMBACH, FRANK F.

1970 Pre-Caddoan Cultures in the Trans-Mississippi South: A Beginning Sequence.
Ph.D. dissertation, Department of Anthropology, Harvard University,
Cambridge.

SCULLY, FRANCIS J.

1966 Hot Springs, Arkansas, and Hot Springs National Park. Pioneer Press, Little
Rock, Arkansas.

STEVENS, ROBERT S.

1893- Reports to the Secretary of the Interior on Improvements at Hot Springs
1895 Reservation. Hot Springs National Park museum collection.

U.S. DEPARTMENT OF THE INTERIOR

1850 Report of the Secretary of the Interior in Answer to a Resolution of the Senate
Relative to the Hot Springs of Arkansas, Ex. Doc. No. 70.

1979 The Waters of Hot Springs National Park - Their Nature and Origin. U.S.
Geological Survey Professional Paper 1044-C.

U.S. HOUSE OF REPRESENTATIVES

1884 Testimony Taken before the Committee on Expenditures in the Interior
Department, Relative to Certain Things Connected with the Government
Property at Hot Springs, Ark., MIS.DOC No. 58, House of Representatives.

YOUNG, GLORIA A. AND MICHAEL P. HOFFMAN.

1993 The Expedition of Hernando de Soto West of the Mississippi, 1541-1543.
University of Arkansas Press, Fayetteville.

**CULTURAL RESOURCES BIBLIOGRAPHY (CRBIB)
HOT SPRINGS NATIONAL PARK**

- Baker, Charles M. *Archeological Inventory, Hot Springs National Park*. 12/1975. pp. 24. HOLD: SWRO
- Barkmann, Herman G.; Moss, Richard. *Environmental Stabilization and Mothballing, Lamar Bathhouse Report*. 1986. pp. 6. HOLD: SWRO
- Benson, Forrest M.; Libbey, Donald S. *History of Hot Springs National Park*. 1955. pp. 54. HOLD: HFC
- Bookhout, Leland T. *The Hale Bathhouse, Central Avenue, Bathhouse Row National Historic District*. 05/1986. pp. 95. HOLD: WASO
- Bookhout, Leland T. *The Maurice Bathhouse, Central Avenue, Bathhouse Row National Historic District, Hot Spring National Park*. 05/1986. pp. 100. HOLD: WASO
- Bookhout, Leland T. *The Ozark Bathhouse Central Avenue: Bathhouse Row National Historic District, Hot Springs National Park*. 05/1986. pp. 96. HOLD: WASO
- Bookhout, Leland T. *The Quapaw Bathhouse, Central Avenue, Bathhouse Row National Historic District, Hot Springs National Park*. 05/1986. pp. 102. HOLD: WASO
- Bookhout, Leland T. *The Superior Bathhouse, Central Avenue, Bathhouse Row National Historic District, Hot Springs National Park*. 05/1986. pp. 96. HOLD: WASO
- Copeland, Randall; Stiles, Wilson. *Historic Structure Report, Fordyce Bathhouse, Hot Springs National Park*. pp. 431. HOLD: WASO
- Cromwell, Neyland, Truemper, Millett & Gatchell, Inc. *Historic Structures Report, Hot Springs National Park*. 11/1973. pp. 200. HOLD: WASO
- Einert, Alfred Erwin. *Magnolia Tree and Landscape Assessment for Bathhouse Row, Hot Springs National Park, Arkansas*. 03/1994. pp. 8. HOLD: WASO
- Greenfield, Judy. *Curatorial Storage at the Fordyce Bathhouse*. 1992. pp. 11. HOLD: HFC
- Greenfield, Judy. *Guidelines for Furnishings Maintenance and Protection, Fordyce Bathhouse*. 1992. pp. 49. HOLD: HFC

- Greenfield, Judy. *Maintenance Situations Requiring Attention and Conservation/ Restoration Concerns for Specific Artifacts, Fordyce Bathhouse*. 1992. pp. 4. HOLD: HFC
- Harrison, Laura Soulliere. *Turning the Corner: The Landscape History of the Administration Building, Hot Springs National Park*. 01/1990. pp. 45. HOLD: WASO
- Kemper, E. C. *Dunbar and Hunter Expedition (1804)*. 07/1936. pp. 4. HOLD: HFC
- Maeder, Richard H. *Steeped in Hot Water: The Establishment and History of Hot Springs National Park*. pp. 15. HOLD: HFC
- Paige, John C.; Harrison, Laura Soulliere. *Out of the Vapors: A Social and Architectural History of Bathhouse Row, Hot Springs National Park*. 1987. pp. 313. HOLD: HFC
- Pardue, Diana R. *Collection Preservation Guide, Hot Springs National Park*. 04/1980. pp. 66. HOLD: WASO
- Petravage, Carol A. *Historic Furnishings Report, The Fordyce Bathhouse, Hot Springs National Park*. 09/1987. pp. 576. HOLD: WASO
- Pitts and Associates Engineers. *Engineering Study of the Quapaw Bathhouse, Phase III, Hot Springs National Park*. 03/1984. pp. 65. HOLD: WASO
- Pitts and Associates Engineers. *Investigative Study of Five Bathhouses, Phase II, Hot Springs National Park*. 02/1984. pp. 250. HOLD: WASO
- Schreffler, Robert. *General Management Plan, Development Concept Plan, Environmental Assessment, Hot Springs National Park*. 1985. pp. 96. HOLD: HFC
- Scott, Jane E. *Overview of Historical Research an Annotated Bibliography and Plans for Future Study*. 06/1978. pp. 9. HOLD: SWRO
- Scully, Frances J. *Hot Springs, Arkansas, and Hot Springs National Park: The Story of a City and the Nation's Health Resort*. 1966. pp. 446. HOLD: SWRO
- Staff. *Bathhouse Row Adaptive Use Program, the Bathhouse Row Landscape: Technical Report 1, Hot Springs National Park*. 06/1985. pp. 102. HOLD: WASO
- Staff. *Bathhouse Row Adaptive Use Program, The Superior Bathhouse: Technical Report 2, Hot Springs National Park*. 06/1985. pp. 28. HOLD: HFC

- Staff. *Bathhouse Row Adaptive Use Program, The Hale Bathhouse: Technical Report 3, Hot Springs National Park.* 06/1985. pp. 35. HOLD: HFC
- Staff. *Bathhouse Row Adaptive Use Program, The Maurice Bathhouse: Technical Report 4, Hot Springs National Park.* 06/1985. pp. 44. HOLD: WASO
- Staff. *Bathhouse Row Adaptive Use Program, The Fordyce Bathhouse: Technical Report 5, Hot Springs National Park.* 06/1985. pp. 44. HOLD: WASO
- Staff. *Bathhouse Row Adaptive Use Program, The Quapaw Bathhouse, Technical Report 6, Hot Springs National Park.* 06/1985. pp. 42. HOLD: WASO
- Staff. *Bathhouse Row Adaptive Use Program, The Ozark Bathhouse, Technical Report 7, Hot Springs National Park.* 06/1985. pp. 35. HOLD: HFC
- Staff. *Bathhouse Row Adaptive Use Program-Technical Report 1 - Landscape.* 07/1985. pp. 102. HOLD: SWRO
- Staff. *Bathhouse Row Adaptive Use Program - Technical Report 2 - Superior Bathhouse.* 07/1985. pp. 28. HOLD: SWRO
- Staff. *Bathhouse Row Adaptive Use Program - Technical Report 3 - Hale Bathhouse.* 07/1985. pp. 35. HOLD: SWRO
- Staff. *Bathhouse Row Adaptive Use Program - Technical Report 4 - Maurice Bathhouse.* 07/1985. pp. 44. HOLD: SWRO
- Staff. *Bathhouse Row Adaptive Use Program - Technical Report 5 - Fordyce Bathhouse.* 07/1985. pp. 44. HOLD: SWRO
- Staff. *Bathhouse Row Adaptive Use Program - Technical Report 6 - Quapaw Bathhouse.* 07/1985. pp. 42. HOLD: SWRO
- Staff. *Bathhouse Row Adaptive Use Program - Technical Report 7 - Ozark Bathhouse.* 07/1985. pp. 35. HOLD: SWRO
- Staff. *General Management Plan, Development Concept Plan, Hot Springs National Park.* 06/1986. pp. 106. HOLD: WASO/SWRO
- Staff. *An Historical Data Section for an Historic Structures Report on the Fordyce Bath House.* pp. 200. HOLD: WASO
- Staff. *Historic Structures Preservation Guide for the Superior Bathhouse.* HOLD: HFC
- Staff. *Historic Structure Preservation Guide for the Ozark Bathhouse, Hot Springs*

- National Park*. 1986. pp. 60. HOLD: WASO
- Staff. *Historic Structure Preservation Guide for the Hale Bathhouse, Hot Springs National Park*. 1986. pp. 60. HOLD: WASO
- Staff. *Historic Structure Preservation Guide for the Quapaw Bathhouse, Hot Springs National Park*. 1986. pp. 60. HOLD: WASO
- Staff. *Historic Structure Preservation Guide for the Fordyce Bathhouse, Volume I, General Instructions*. 10/1992. HOLD: HFC
- Staff. *Interpretive Prospectus*. 1986. pp. 36. HOLD: SWRO
- Staff. *Inventory of Furnishings, Part III - Fordyce Bathhouse*. pp. 37. HOLD: SWRO
- Staff. *Land Protection Plan*. 04/1985. pp. 38. HOLD: SWRO
- Staff. *Proposed Boundary Change*. 12/1983. pp. 12. HOLD: SWRO
- Staff. *Resources Management Plan/Environmental Assessment*. 1981. pp. 58. HOLD: SWRO
- Staff. *Resources Management Plan and Environmental Assessment, 1981, Hot Springs National Park*. 10/1981. pp. 49. HOLD: HFC
- Staff. *Statement for Management*. 01/1976. pp. 58. HOLD: SWRO
- Staff, Denver Service Center. *Historic Structures Preservation Guide, Maurice Bathhouse, Hot Springs NP*. pp. 60. HOLD: WASO
- Walling, Larry; Cowley, Jill; Feierabend, Carey; Johnson, Gary; Rhod. *Landscape Management Plan, Bathhouse Row, Hot Springs National Park*. 09/1989. pp. 140. HOLD: WASO
- Witsell, Evans, and Rasco. *Historic Structures Report, Hale Bathhouse*. 04/ 1990. HOLD: WASO
- Witsell, Evans, and Rasco. *Historic Structure Report, Quapaw Bathhouse*. 04/ 1990. HOLD: WASO
- Witsell, Evans and Rasco. *Historic Structures Report, Maurice Bathhouse, Hot Springs National Park*. 04/1990. HOLD: WASO
- Witsell, Evans and Rasco. *Historic Structure Report, Ozark Bathhouse*. 04/1990. HOLD: WASO

Witsell, Evans; Rasco, Pa. *Historic Structures Report, Superior Bathhouse*. 04/1990. HOLD: WASO

Wright, Robert D.; O'Gwynn, Claude H. *Existing and Historic Bathhouse Row Landscape Study, Hot Springs National Park, Arkansas*. 09/1987. pp. 15. HOLD: WASO