

1.4
D-16A

IN
STORAGE

Interpretive Prospectus

WUPATKI NATIONAL MONUMENT

Arizona

1995



ON MICROFILM

B&W Scale

2/24/2003

PLEASE RETURN TO:
TECHNICAL INFORMATION CENTER
CENTER SERVICE CENTER
NATIONAL PARK SERVICE

**A PLAN FOR
THE INTERPRETATION OF**

WUPATKI NATIONAL MONUMENT

ARIZONA

**prepared by the
Division of Interpretive Planning
Harpers Ferry Center
Harpers Ferry,
West Virginia**

**approved by
Kim W. Watson,
Acting Superintendent,
Flagstaff Areas
May 31, 1995**

While the natural landscape reshaped with periodic eruptions, the Sinagua Indians began to reshape their own cultural landscape. They came out of their earth-covered homes and down from the high country. In the desert along Deadman's Wash they began to construct towering stone villages that could house over a hundred people.

From what remains, we can see that construction of this magnitude took a great deal of technological sophistication. Skills in planning, engineering and stone masonry are apparent. Where did the Sinagua learn these skills? Stone was used in some of their pit houses, but nothing approaching the sophisticated stonework found at Wupatki. The most likely source was the Anasazi, who were also living in the Wupatki basin and had been building stone pueblos for some time. Whatever the source, the Sinagua learned quickly and incorporated their new knowledge into their on-going way of life. . . .

Wupatki was a turning point for the Sinagua. Here they became a pueblo people and remained so even after they left the area. For us Wupatki represents the past, but for the Sinagua it was the future.

*Scott Thybony,
A Road Guide to Wupatki and
Sunset Crater National Monuments.
Tucson: Southwest Parks and
Monuments Assn., 1994*

TABLE OF CONTENTS

INTRODUCTION	1
PLANNING CONSIDERATIONS	2
Park Significance	2
Park Legislative Authorities	2
Park Environment	3
<i>Cultural Resources</i>	5
<i>Natural Resources</i>	10
Adjacent Land Uses and Trends	12
Visitors and Visitor Use	13
The Planning Context, Including Recent Planning History	15
Existing Conditions	18
<i>Parkwide Features, Facilities and Services</i>	19
<i>Wupatki Visitor Center</i>	20
Summary of Media Problems and Needs	21
THEMES AND OBJECTIVES	26
Interpretive Themes	26
Management Objectives for Interpretation and Visitor Use	27
THE PLAN	29
The Vision, or Desired Visitor Experience	29
Implementation of the Vision	31
<i>Wupatki Visitor Center</i>	31
<i>Parkwide Wayside Exhibit System</i>	35
<i>Publications</i>	42
Summary of Interpretive Theme Treatment in Interpretive Media	44
ADDITIONAL PLANS/STUDIES NEEDED TO FULLY IMPLEMENT THIS PROSPECTUS ..	46
SELECTED REFERENCES	48
PARTICIPANTS IN THE PLANNING PROCESS	53
APPENDIX: SPECIAL POPULATIONS PROGRAMMATIC ACCESSIBILITY GUIDELINES FOR INTERPRETIVE MEDIA	55

LIST OF MAPS

Map 1: Resources and Facilities, Wupatki National Monument 7

Map 2: Proposed Wayside Exhibits, Wupatki National Monument and FS 545 .. 37



INTRODUCTION

This Interpretive Prospectus has been prepared to set forth an interpretive vision for both Wupatki National Monument and the Sunset Crater Volcano/Wupatki Loop Drive corridor.

The completion of an eight-year survey project of the archeological resources of Wupatki National Monument [35,254 acres] in 1988 has increased the knowledge about the monument's cultural resources, and the lifeways of the peoples who have lived there, by quantum proportions. This substantial increase in significant information about the park and its story has emphatically reinforced the need to upgrade and replace the park's existing outdated interpretive media--at the Wupatki Visitor Center, throughout the monument, and at numerous prominent resources along the Sunset Crater Volcano/Wupatki Loop Drive.

New information gained from this extensive survey has also significantly refocused the overall interpretation of the prehistoric use of these lands. Traditionally, based on the work of Dr. Harold S. Colton, the concepts of *cultural frontier*, *prehistoric land rush*, and *significant periods of abandonment* have dominated the explanations of prehistoric occupation and lifeways. However, the work of contemporary archeologists strongly suggests that the concepts of *cultural interface area*, *localized population shifts and migrations*, and *a shifting continuum of occupation* are much more appropriate for a more accurate interpretation of lifeways of American Indians of this area--both prehistoric and modern.

This new body of cultural resource information, and the subsequent knowledge and interpretations derived from the analysis of this new data, mandates a need for revised, new interpretive media and drives the need for this new prospectus.

PLANNING CONSIDERATIONS

Park Significance

Wupatki National Monument protects an outstanding matrix of cultural resources preserving a significant zone of cultural coexistence, interface and even interaction among the prehistoric Sinauga, Cohonina and Anasazi peoples, known by the Hopi as the Hisatsinom.

Presidential Proclamation No. 1721, which established the monument in 1924, stated ". . . It appears that the public interest would be promoted by reserving these prehistoric remains as a National Monument together with as much land as may be necessary for the proper protection thereof . . ."

Although the variety of the monument's 2,638 known cultural features range in size and complexity from small agricultural check dams and one-room pithouses to large, multistoried pueblos, the monument is particularly rich in prehistoric agricultural features and systems. *All* known types of prehistoric agricultural features have been documented within Wupatki National Monument. Agricultural features and sites are found in the greatest abundance of all features and/or sites known within the park.

Additionally, the range of cultural features or sites within the monument constitutes a notable *continuum* cultural life styles from circa 1060-1070 A.D. to the mid-20th century.

Park Legislative Authorities

President Calvin Coolidge initially established Wupatki National Monument as a 2,234-acre two-piece area on December 9, 1924 (43 Stat. 1977) to preserve ". . . two groups of prehistoric ruins [the Citadel ruins and Wupatki ruins] built by the ancestors of a most picturesque tribe of Indians still surviving in the United States, the Hopi or People of Peace."

Three additional actions subsequently changed the monument boundaries between 1937 and 1961. To preserve additional archeological resources, the

boundaries were enlarged to 33,631 acres by presidential proclamation of July 9, 1937 (50 Stat. 1841). On January 22, 1941 (55 Stat. 1608), a presidential proclamation deleted a 52-acre parcel of land to provide for the construction and operation of a diversion dam on the Little Colorado River for irrigation of Navajo Indian Reservation lands east of the monument [leaving a total acreage of 33,579]. Public Law 87-136, passed on August 10, 1961, authorized an exchange of lands to provide access to Crack-In-Rock Pueblo and to add certain federally-owned lands to the monument to further preserve archeological resources. As a final result of all of the above actions, the monument currently consists of 35,253 acres. At the time of this writing, House Resolution #694 is proposing minor boundary adjustments to the monument.

Wupatki National Monument was studied under the Wilderness Act (P.L. 88-577 of September 3, 1964) to determine the suitability of its roadless lands for possible wilderness designation. Upon completion of the study and the holding of a public hearing on the preliminary study in 1970, a final wilderness recommendation determined that lands in Wupatki were unsuitable for inclusion in the national wilderness preservation system. The recommendation, sent to Congress in a Presidential message on February 8, 1972, concluded that the monument is essentially a cultural area with basically different purposes, uses, and management concepts from those of wilderness, and that further livestock grazing, under lease, exists throughout the monument.

For over 50 years of Wupatki's 70 years of existence, it has been administratively included in some type of a larger management group. These management groups were: Southwestern National Monuments [12/24-07/57]; Flagstaff Group [02/68-01/71]; Administratively Supervised by the Superintendent of Grand Canyon NP [01/71-10/71]; Navajo Lands Group [10/71-09/82]; and Flagstaff Areas Office [10/90-present]. During the remaining 19 years, the Superintendent of Wupatki also managed Sunset Crater National Monument.

Park Environment

Wupatki National Monument occupies 56 square miles of dry, rugged land on the southwestern Colorado Plateau, located directly west of the Little

Colorado River. It is located in east central Coconino County about 177 miles northeast of Phoenix, a rapidly growing metropolitan complex of over two million people, and 37 miles northeast of Flagstaff, the major city and economic center of northern Arizona [1990 population of nearly 46,000]. It, along with Sunset Crater Volcano National Monument, is located in Arizona's Fifth Congressional District.

The region surrounding the Wupatki National Monument and nearby Sunset Crater Volcano National Monument is rural, and for the most part sparsely populated. These two national monuments lie between the high, elevated Coconino National Forest to the southwest and the semiarid desert lands of the Diné or Navajo and Hopi reservations to the northeast. Expansive high deserts, mountains, mesas, and remnants of volcanic activity features form the landscape of this region.

Interstate 17 and U.S. 89 is a major north-south route providing access to Wupatki and Sunset Crater Volcano. Additionally, ready access to the monument is provided by major east-west access via I-40 through Flagstaff. Transportation to and from Flagstaff is further enhanced by Amtrak rail service, scheduled airline service, and interstate bus service.

All of the park's 35,253 acres are federally owned. Additionally, National Park Service manages and maintains the 35-mile Sunset Crater Volcano/Wupatki Loop Drive corridor (132-foot-wide right-of-way), as specified in an August 5, 1975 cooperative agreement between the U.S. Forest Service and the National Park Service.

This section of the Colorado Plateau and the adjacent Verde River valley contains several other noteworthy sites, all of which lie within a day's drive of the monument, that relate to prehistoric Indians who once inhabited the Wupatki area. These include: Walnut Canyon National Monument [one of the three units of the NPS Flagstaff Areas group]; the Sinagua sites at Montezuma Castle and Tuzigoot National Monuments in the Verde Valley south of Flagstaff; and the Elden Pueblo [USFS] Sinagua site in the immediate Flagstaff vicinity; the Anasazi sites at the Tusayan Pueblo along Grand Canyon National Park's East Rim Drive; and the Anasazi cliff dwellings of Canyon de Chelly and Navajo National Monuments in northeastern Arizona.

Cultural Resources. The entire 56-square-mile Wupatki National Monument is listed on the National Register of Historic Places. The primary cultural resource of Wupatki National Monument is the large matrix and concentration of significant archeological sites, features, and pueblos.

Consequently, with the exception of developed areas within the park, the monument is classified as a cultural zone, as described in *Management Policies, U.S. Department of the Interior/National Park Service, 1988.*

The comprehensive Wupatki Archeological Survey Project, conducted and directed by Bruce Anderson during the period of 1981 to 1988, inventoried all monument lands. Its results more than tripled the knowledge of archeological sites and features within this monument. Specifically, the survey resulted in the identification of approximately 2,636 individual sites, compared with about 800 previously known sites, features, and pueblos. Of those sites, over 2,300 are significant prehistoric sites and features generally dating from A.D. 1070 to 1250.

Also included among those 2,636 sites are 67 historic Navajo residential sites, and over 250 historical sites that can be attributed to Hopi, ranchers, miners, traders, herders, film makers, and others. The monument also contains cultural sites significant to contemporary American Indians. Local Diné or Navajo and Hopi still use multiple sites within and near the monument.

Numerous additional prehistoric sites and features are found on adjacent U.S. Forest Service [USFS] lands southwest of the monument.

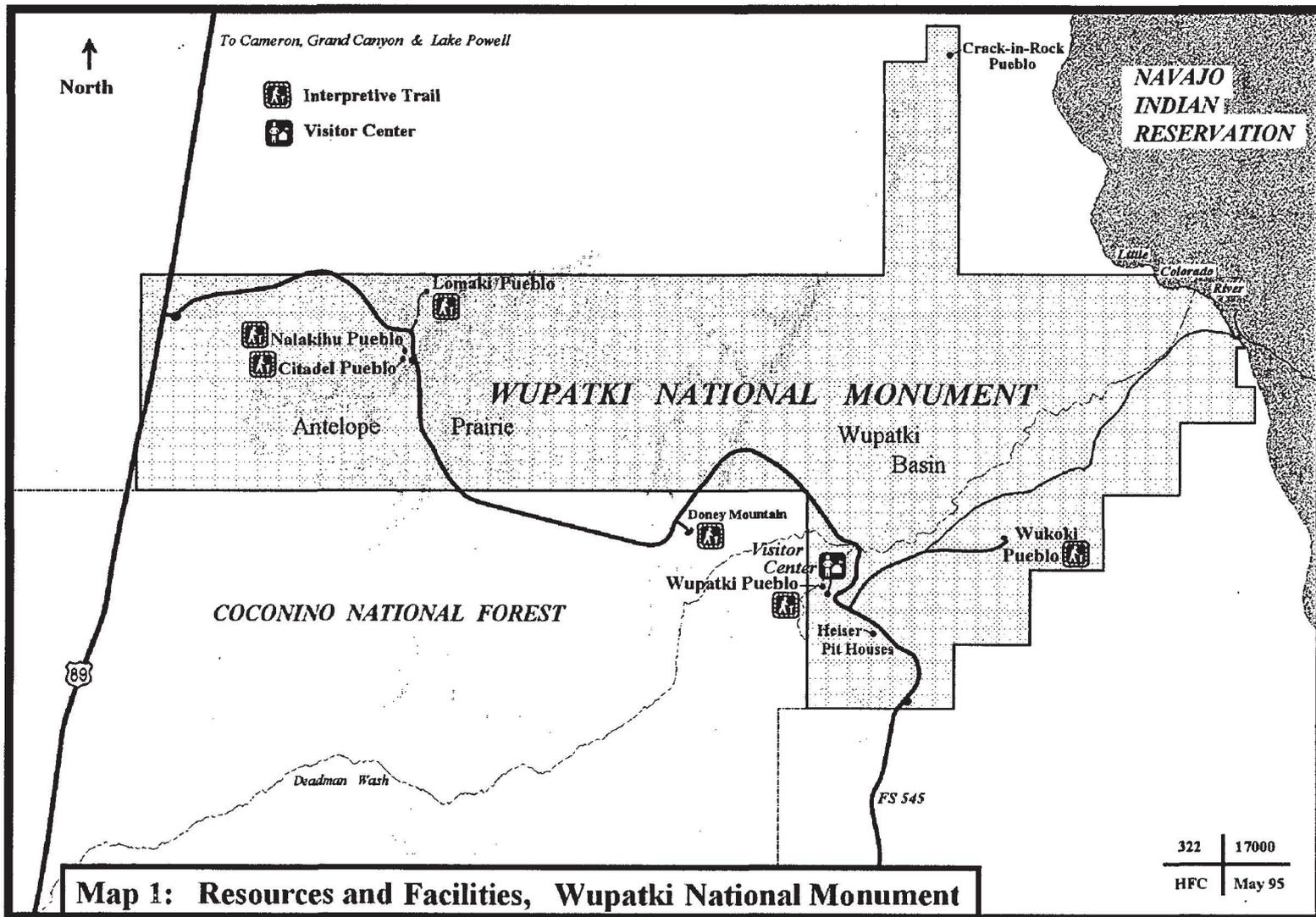
The surviving features identified in this survey seem to show that different groups of Puebloan peoples--the Sinagua, Anasazi, Cohonina, and perhaps both Hohokam and Chacoan influence, and known to Hopi as the Hisatsinom [meaning "the ancestors"]--quite likely may have coexisted as contemporaries within a relatively confined area. It is perhaps significant to note that some of these features represent the furthest influence of some of these culture groups. For example, the amphitheater feature at the Wupatki pueblo site is considered by some archeologists to be evidence of the westernmost extension of the Chacoan influence. Similarly, the ballcourt feature at the same site could be considered to be at the northernmost extension of this type of Hohokam influence.

Inventory results also indicate that:

- *agricultural features were the most abundant of all features or sites found; and all known types of prehistoric agricultural features were found within Wupatki National Monument;*
- the Puebloan peoples inhabiting the Wupatki area apparently maximized options and opportunities in agricultural practice by varying the use of different types and methods of agricultural cultivation as the conditions and circumstances in different locations seemed to dictate;
- trade exports from the Wupatki area are believed to have been mainly lithic blanks and cotton textiles;
- trade imports into the Wupatki area were numerous, and included: shells, turquoise, paint palettes, worked/carved stone, and parrots;
- rabbits, which were hunted but *not* domesticated, were both the *most important hunted animal and the Puebloan inhabitant's primary protein source!*
- the Puebloan inhabitants, or Hisatsinom, domesticated dogs and parrots; however, turkeys were hunted, *but not domesticated.*

Eight of these prehistoric sites, which could be classified as both significant and--for the most part--impressive, are briefly described in the next several paragraphs [See *Map 1: Wupatki National Monument Resources and Facilities*, page 7, for locations of these archeological features].

The Wupatki Pueblo complex, the primary cultural feature associated with the park visitor center, includes the three-story, 100-room main pueblo, a ceremonial amphitheater, and masonry structure commonly thought to be a ballcourt. Ceremonial games, possibly similar to those in early Meso-american cultures, may have been held in the latter--or perhaps it served as a ceremonial dance court instead. Excavations of the main pueblo have yielded numerous fragile artifacts, including cotton textile fragments, paint



7

ON MICROFILM

palettes, carved stone, and the remains of 42 macaws--which is a greater concentration than has been found at Pueblo Bonito in Chaco Canyon.

The Citadel Pueblo in the western third of the monument contains 30 to 50 rooms built on a lava mesa near a large limestone sink. The results of the recent monumentwide survey were inconclusive concerning the Citadel's prehistoric function. At best, the actual use of the Citadel pueblo is still problematical for archeologists. It may have served a key communications function in addition to, or perhaps instead of, a defensive function. This location has a clear line of sight in all directions for significant distances, making its use as a communications focal point at least probable.

The Nalakihi pueblo, near the base of the Citadel, is typical of many of the smaller pueblos in the Citadel area. Archeologists found an unusual cremation burial and several jug-shaped earth ovens--some of which were used for burials--during the excavation of this site.

The picturesque Lomaki Pueblo area, located in the west monument's Antelope Prairie near a group of earth cracks in the Citadel area, has--as determined by the recent inventory/survey--significantly greater site density than the remainder of the monument and especially the larger Wupatki Basin in the east monument area.

Wukoki is a multiple roomed, 2-½ story pueblo which is visible for several miles. This pueblo, reached via a three-mile access road from the main Sunset Crater Volcano/Wupatki Loop Road in the greater Wupatki Basin.

Approximately two-thirds of the monument's area with its related cultural sites and features are accessible to the public under special conditions, such as participation in Ranger-led activities or through the back country permit system.

Archeological surveys give indications that prehistoric transportation routes generally followed water courses/drainages because water sources were *critical factors* along any developed route in this generally arid region. It should be noted that all travel along these prehistoric routes was on foot; horses or other domesticated animals were not available to them.

The location of large sites in the Wupatki basin [i.e., Wupatki pueblo and Wukoki pueblo sites] may well have been due to their proximity to Deadman's Wash. The recent monumentwide inventory/survey seems to show that this wash was apparently a major trade route leading from the Little Colorado River northwestward to the San Francisco Peaks area.

Wupatki National Monument artifact collections are found at the park, the Museum of Northern Arizona in Flagstaff, the Western Archeological and Conservation Center in Tucson, and the Southwest Regional Office in Santa Fe. A master inventory of Wupatki artifacts is in process and nearly completed, using uniform catalogue standards. The park staff includes a Curator, and a park collection preservation guide is in preparation.

Natural Resources. The physiography of the high desert-mesa landscape dominates the natural resources of Wupatki National Monument. Blowholes and earth cracks are surface indications of substantial joints and cracks commonly found in the Kaibab limestone formation. Blowholes are small openings that allow cyclic movement of air in and out of the underground system. Earth cracks are larger openings, such as the Sipapu crack which is 500 feet deep. The Citadel sink, just south of the Citadel Pueblo and nearly 200 feet deep, is probably the result of a large cavern collapse.

Perhaps the two most significant physiographic features of the monument are the Wupatki Basin and the Doney Cliffs. Deadman's Wash approximately bisects the extensive Wupatki Basin. Of these two features, the exposed fault line escarpment, called Doney Cliffs or Ridge, could easily be considered the monument's most prominent physiographic feature. This ridge runs in a northeast-southwest line through the center of the monument, separating the Antelope Prairie on the west from the Wupatki Basin on the east.

The monument contains a few springs, but no permanent streams. The water table depth in this region is estimated at about 900 to 1,800 feet. Flooding is infrequent and is not a problem at existing developed areas.

The elevation of monument lands ranges from 4,300 feet, along the Little Colorado River, to 5,600 feet, at the North Entrance. The combination of elevation, landforms and location results in warm, dry summers, and moderate cold, dry winters for the monument. Average precipitation is

about eight inches at the Visitor Center, but probably 50% greater in the western corner of the monument. Snowfall is erratic, with negligible drifting. Strong winds from the southwest occur in spring and early summer.

The monument's vegetation is typical of the high desert of northern Arizona. The western half of Wupatki is mesa country dominated by blue and black grama grasses, with an open woodland of one-seed juniper along the southern boundary. Research indicates that the juniper has invaded the area as a result of a great number of years of domestic grazing activity.

The eastern half of the monument, extending to the Little Colorado River, is desert-shrub including rabbitbrush, snakeweed, saltbush, Mormon tea, and Apache-plume. Exotic species such as tamarisk and camelthorn are encroaching on the native species near the river. Because of decades of domestic livestock grazing, lands near the Little Colorado River almost have been denuded of vegetative cover.

Permission for several Diné or Navajo families to graze livestock in Wupatki National Monument is being phased out. Based on traditional use, in 1980 two Navajo families were granted 10-year renewable permits for grazing in the Wupatki Basin. In 1990, the Regional Director issued a Letter of Authorization giving permission to the one remaining member of the original residential family [Stella Peshlakai Smith] lifetime residential and grazing privileges at Wupatki. Both the grazing permits and the Letter of Authorization are not transferable and expire with the death of the holder. Park management is currently pursuing an equitable solution to this concern.

Monument wildlife includes coyote, pronghorn, mule deer, porcupine, badger, bobcat, gray fox, jackrabbit, ground squirrel, various reptiles, and numerous bird species. Elk visit occasionally during the wintertime.

There are no known plants or animals on the U.S. Fish and Wildlife Service endangered and threatened species list inhabiting Wupatki on either a year-round or transient basis. However, several species of plants under consideration for placement on the protected species list are either known to or may occur at Wupatki; they include: mock pennyroyal [*Hedeoma diffusum*]; Peebles bluestar [*Amsonia peeblesii*]; brittlebush (green) [*Encelia frutescens*]; scorpionweed [*Phacelia welshii*]; upright blue penstemon [*Penstemon virgatus* var. *pseudoputus*]; freckled milk vetch [*Astragalus*

lentiginosus var. *ambiguus*]; and cushion cactus [*Coryphantha vivipara* var. *rosea*].

Adjacent Land Uses and Trends

Land use in the region adjacent to Wupatki National Monument varies from the expanding urban influences of Flagstaff--which has experienced more than 40% growth in the last decade--near Sunset Crater Volcano, through expanding recreational pursuits, to low intensity grazing near Wupatki.

Recreational opportunities in the immediate region range from hunting, off-road vehicle use and cross-country skiing, to hiking, sightseeing, photography, nature study, and visiting archeological and historical sites.

The area between Flagstaff and Sunset Crater Volcano rapidly is being subjected to both increased commercial development and greater residential population. The remainder of the region surrounding Wupatki and the access loop road is sparsely populated. However, a private development northeast of Sunset Crater Volcano (called *Alpine Ranchos*) is growing in population, leading to substantial increases in nonpark travel on park roads.

Neighboring Coconino National Forest is under multiple use management, with active recreation and livestock grazing as the primary uses in the sections adjacent to Wupatki and the access Loop Drive (FS 545). Private ranching and low intensity grazing is the other primary land use adjacent to Wupatki National Monument.

Tourism and active recreational activities are rapidly replacing ranching, lumbering and minerals extraction as the primary economic activities of the surrounding region.

The increased private ownership of offroad recreational vehicles and a major Offroad Vehicle (ORV) recreational use area in the adjacent Coconino National Forest have falsely created an illusion of a double standard of permissible land uses within neighboring Sunset Crater Volcano National Monument. Park visitors, driving the Sunset Crater Volcano/Wupatki Loop Road rarely recognize the NPS/USFS boundary. Therefore, many visitors are

left confused by access restrictions for the fragile Sunset Crater Volcano cinder cone and the allowance of destructive and perhaps irreversible recreational use on other nearby cinder cone areas. Joint planning between the two federal agencies is needed to resolve this problem. Moving ORV activities to areas beyond the immediate viewshed of the national monument--especially from the Cinderhills Overlook--might be the preferred solution.

Areas north and west of Wupatki have been identified for possible inclusion in the Diné or Navajo/Hopi Land Issue Settlement. Ownership of the land, land uses, and populations could change. The results could pose negative threats to park resources and visitor experiences.

In addition to the other prehistoric Indian sites of the region which are listed on page 4, other visitor and recreational use attractions in the region include: the Museum of Northern Arizona, Grand Canyon National Park, Glen Canyon National Recreation Area [Lake Powell], Meteor Crater, Petrified Forest National Park, Hubbell Trading Post National Historic Site, Mesa Verde National Park, the Hopi Mesas, Lowell Observatory, Jerome and Fort Verde State Historic Parks in the Verde Valley, the Arizona Snow Bowl in the San Francisco Peaks area, Oak Creek Canyon/Sedona area, and numerous recreational sites and facilities in the Kaibab and Coconino National Forests.

Visitors and Visitor Use

Visitor Use Patterns. Wupatki, like the other two national monuments of the Flagstaff Areas, is--for most visitors--an *itinerary park*, rather than a *destination park*. Most Wupatki visitors have included a visit of the monument as part of a broader itinerary that usually includes either several other southwestern U.S. archeological sites and/or a visit to Grand Canyon National Park. Only 13% of those surveyed in the 1992 *Assessment of Visitor Experiences at Three Anasazi Cultural Parks* survey responded that Wupatki was their primary destination. Approximately two-thirds of the visitors for whom Wupatki was but one of several stops on their total trip had already visited other cultural areas or planned to do so.

Therefore, time available to most visitors is usually limited, and they usually experience only those resources readily accessible from the park loop road

(Forest Service Road 545). Prime cultural resources accessible to park visitors are: Wukoki and Wupatki Pueblos in the Wupatki Basin, and the Citadel, Nalakihi and Lomaki Pueblos in the Antelope Plains section of the monument. The largest, most impressive site is Wupatki, the multistory residential complex which is reached via a self-guiding trail from the monument's visitor center.

Access to the monument is by private vehicle or sightseeing bus tours; there is no public transportation to either Wupatki or the other two monuments in the Flagstaff Areas management unit.

Visitor Characteristics. During the past decade Wupatki National Monument has averaged approximately 245,000 per year, with annual totals ranging from 198,000 in 1985 to 274,000 in 1992. The general public use trend has been a steady--sometimes gradual--annual increase with significant drops in 1985 [198,000] and 1991 [241,000], and an unusual peak in 1992 [274,000]. However, monument staff has begun to question the accuracy and viability of the current computation formula used for calculating monthly public use. From observations, the staff has noted a greater proportion of all park visitors seem to stop at the Wupatki Visitor Center than current calculations apparently indicate. *[It is appropriate to note than visitor center visitation is an actual "hard" count, whereas the total monument visitor use is calculated with a formula based on Sunset Crater Volcano and Wupatki visitor center attendance figures, without benefit of any automobile traffic counter devices].*

Typically, about 45% of all park visitors [or about 115,000] stop at the visitor center. The life and cultural history of prehistoric peoples is the central interpretive message of both the visitor center and the monument in general. Typical visitor use of the visitor center complex includes a brief look at the exhibits, browsing/purchasing in the cooperating association sales area, and a walk on all or part of the self-guiding Wupatki Pueblo Trail.

Characteristically, the monument's peak visitation month will be either July or August. In 1994, July was the peak visitation month. During that month, the average daily visitation was approximately 1,185.

Recently, park travel during the "shoulder season" months of March to May in the spring and September and October in the fall has increased significantly, thus creating an extended demand for personal services and resource access over a longer period of time. The park visitation for those months in 1994 was about 49% of annual visitation, compared with about 42% of the total for 1980.

Considering the difference in visitation between Wupatki and Sunset Crater Volcano, apparently the travel distance from Flagstaff and the visitors' time budget significantly affect the annual visitation. Sunset Crater Volcano, which is along the same tour road but is 26 miles closer to Flagstaff, has averaged 512,000 annual visitors over the past decade, which is more than twice the annual visitation of Wupatki.

Approximately 4% of all park visitors in 1994 availed themselves of the personal services interpretive programs, such as Wupatki Pueblo Overlook talks, cultural demonstrations, and discovery hikes. Of the 114,000 visitors stopping at the Wupatki Visitor Center, about 0.1% were wheelchair users.

Nava-Hopi Tours, Inc., Grayline Tours, and smaller commercial companies--mostly based out of Flagstaff--operate in the monument throughout the year. During 1993, about 2-½% of all park visitors arrived by bus. Usually, their time within the monument is even more limited than other park visitors. Many visitors stop only at the Visitor Center/Wupatki Pueblo area. Most of these visitors make it no further than the Wupatki Pueblo Overlook or even the visitor center, unless provided with an overlook talk or a personal tour.

The Planning Context, Including Recent Planning History

The current management cluster, the NPS Flagstaff Areas, was formed in 1990 when Walnut Canyon National Monument was transferred from Western Region and joined with Wupatki and Sunset Crater Volcano. This resulting cluster of three national monuments is considered a *single unit* by the regional office. Planning documents, in some way, should reflect this cluster management entity. In the future, all major planning documents will need to be revised to include all three monuments.

Most planning documents for Wupatki, including the General Management Plan, are outdated and need major revision and/or rewriting.

The current **Wupatki/Sunset Crater General Management Plan/Development Plan [GMP/DCP]** was approved in June, 1982, by Regional Director Donald Dayton. The completion of the monumentwide archeological inventory, new management actions, and improved working relationships with American Indian groups with traditional ties to and interest in these lands has seriously compromised the timeliness and validity of the GMP/DCP. Although good, up-to-date versions of the **Statement for Management and Resource Management Plan** will permit efficient management of the Flagstaff Areas on a short-term basis, they will not address long-term needs. Long-term management goals and future visions need to be addressed through the General Management Plan/Development Concept Plan process for these combined areas.

A new **Statement for Management: The Flagstaff Areas: Wupatki, Sunset Crater Volcano, and Walnut Canyon National Monument** was approved by Regional Director John E. Cook on October 26, 1994. Based upon the enabling legislation for all three monuments, plus all other applicable legislation and directives [see page 21 of this *Statement for Management*], this document sets the pace for treating this management group as a *single unit*. It is the key park document identifying and communicating management concerns and issues for these three Flagstaff Areas, and will serve as a basis for future planning and research.

The **Scope of Collection Statement for Wupatki and Sunset Crater National Monuments**, which was written and approved in 1982, is short (only 1-½ pages) incomplete, outdated and generally inadequate. A "*Collection Management Plan for Flagstaff Area Parks*" is in preparation and will need to be amended for adaptation to the new GSA building which will become park headquarters. The trip report for the team visit also recommends the preparation of a "*Collection Storage Plan*" for the combined areas.

A **Resource Management Plan [RMP]** for Wupatki and Sunset Crater Volcano was approved in January, 1989, and undergoes annual project statement revisions. However, the preparation of a combined **Resource Management Plan for the Flagstaff Areas** is currently in progress, with completion expected within the near future.

A Draft Backcountry Management Plan has been completed and is in the review process. Completion and approval are expected in the near future.

Although an approved Land Protection Plan: Walnut Canyon National Monument [December, 1987] exists, there is no such planning document for Wupatki. A "Land Protection Plan for the Flagstaff Areas" is needed for the entire management unit. Specifically for Wupatki, such a document will need to consider and address the possible negative threats to park resources and visitor experiences which may be resultant from the involvement of lands north and west of the monument in the Navajo/Hopi Land Issue Settlement.

Two additional studies, related to interpretation and visitor services at Wupatki, are in progress--an "Ethnographic Overview of the Flagstaff Areas," which was initiated in April 1993, and an "Assessment of Visitor Experiences at Three Anasazi Cultural Parks: Chaco Culture, Mesa Verde, and Wupatki," conducted under cooperative agreement with the National Park Service by the School of Forestry, Northern Arizona University, during the summers of 1992 and 1993. A final report for the "visitor experience assessment" study is in preparation.

Like the park's General Management Plan, the existing *Sunset Crater and Wupatki National Monuments: Interpretive Prospectus* is over a decade old and definitely outdated by the new information base provided by the 1981-1988 monumentwide archeological survey.

The following factors need to be considered for this prospectus and subsequent media planning projects for Wupatki:

- increasing visitation, and the impacts on infrastructure (including the visitor center, as well as roads, trails, comfort facilities, and parking availability);
- expanded visitor seasons, demanding personal services and resource access for longer periods of time during "shoulder seasons" in the spring and fall;
- providing personal educational experiences for these larger numbers of visitors over an extended user season;

- the continuing degradation of cultural and natural resources stemming from both additional vandalism and human erosion due to increased visitation, and continuing environment forces; resource protection and preservation activities will continue to become increasingly more important;
- the plans by the Arizona Department of Transportation to improve U.S. Highway 89, and the projected resulting increase in traffic which will undoubtedly impact Wupatki National Monument;
- improving facilities to accommodate handicapped visitors and employees;
- the growth of Flagstaff, Arizona, and the demands by the local population for increased recreational opportunities;
- outdated interpretive and informational signs, exhibits and museum displays;
- negotiations regarding the Diné or Navajo/Hopi Indian Land Settlement may change the ownership of adjacent lands and land uses around Wupatki National Monument; some of which may pose threats to park resources and visitor experiences [*i.e., intensified grazing/trespass, concentrated residential development, closure of access through adjacent lands, increased use of park roadways for access to adjacent lands, construction of new roads on adjacent lands accessed through the monuments*).

Existing Conditions

The paved 35-mile Sunset Crater Volcano/Wupatki loop road, which connects with U.S. 89 at both ends, provides visitors with a scenic drive as well as access to Wupatki's major features. Upright parkwide orientation panels, with adjacent bulletin board cases, are provided at both the north and south entrances to the loop drive and at the south entrance to Wupatki National Monument.

Parkwide Features, Facilities and Services. [See *Map 1: Wupatki National Monument Resources and Facilities*, page 7, for locations of the interpretive and visitor use facilities discussed in this section]. Visitors entering the monument from the south often make their initial stop at the Wukoki Pueblo. The 2½-mile access road to Wukoki intersects with the loop drive about ¼ mile south of the monument visitor center. An outdated interpretive wayside panel and a short loop trail from the parking lot help visitors experience this prominent 2-½ story pueblo.

Visitors entering the monument from the north normally stop first at Lomaki Pueblo. A short trail, with several interpretive waysides, at the end of a ½-mile road accesses this picturesque pueblos group located along prominent earthcracks.

The most heavily visited feature/facility in the monument is the Wupatki Pueblo complex with its adjacent park visitor center. The Wupatki complex includes: a multistory pueblo which is the largest within the monument, an amphitheater, a ballcourt, and a blowhole. Visitors experience this complex via a hard-surfaced self-guiding trail using a guide booklet.

Some visitors arriving at Wupatki from Sunset Crater Volcano, even with sufficient orientation opportunities, assume that the first pueblo they come to--Wukoki--is the only significant park resource. The result is their failure to save enough of their limited time to experience the other features. Similarly, some visitors arriving from the north entrance think that Lomaki and the Citadel Pueblo area are the park's only significant cultural resources.

Other major visitor points of interest within the monument and adjoining lands are the Citadel/Nalakihi Pueblos Complex located at a roadside pulloff, and trails to the summits of two adjacent cinder cones on Doney Ridge from the Doney Mountain picnic area. Each of these features is served by a self-guiding trail with a limited number of dated interpretive wayside exhibits.

Developed turnouts, as well as most of the principle features of the park, lack adequate onsite interpretation, such as that which can be provided with interpretive wayside panels.

Interpretive programs, such as Wupatki Pueblo Overlook talks and cultural demonstrations, are offered by the park's interpretive staff at various locations within the monument during the summertime.

During April and October, the park staff conducts a total of eight organized overnight backpacking trips to Crack-in-the-Rock pueblo, located at the northern boundary of the park in the monument's remote northern panhandle.

At present, visitor use areas are restricted to specific trails, pueblos, and areas of the monument where control of activities and monitoring is possible with existing staff levels. Recently, park staff has become aware of the existence of a small but increasing number of visitors who seem to prefer experiencing park resources on their own. A backcountry use permit is required for visitors such as these who use the two-thirds of the monument which is open to backcountry day use.

Wupatki Visitor Center. The monument's visitor center provides visitors with:

- orientation/information services at a staffed information desk;
- outdated permanent exhibits, including a reconstructed replica of a room from Wupatki pueblo;
- a cooperating association sales facility [Southwest Parks and Monuments Association] offering publications and interpretive materials pertaining especially to Wupatki and prehistoric Indian cultures of northern Arizona and the adjacent Four Corners area;
- except for a video playback monitor in the sales area, the visitor center lacks any type of audiovisual programming.

The existing exhibits are over 30 years old and the exhibit techniques used are therefore obsolete by sheer age. The interpretive messages are outdated because of the development of an extensive new information base gained from the 1981-1988 parkwide archeological inventory and analysis of additional new knowledge and data.

The park visitor center also houses significant parts of the monument's substantial monument collections, including approximately 5,000 artifacts, archival materials, and library materials [including rare books]. *[Note: The remainder of the approximately 15,000 artifacts in the total Wupatki collection are physically located at the NPS Western Archeological and Conservation Center in Tucson, the Museum of Northern Arizona at Flagstaff, and at the Southwest Regional Office in Santa Fe.]* At present, these collections are maintained in poor environmental conditions, with little control of temperature and humidity available.

Recently, park staff has discovered that some museum exhibit artifacts are *funerary objects*, and therefore subject to Native America Graves and Repatriation Act [NAGPRA] restrictions. Park staff is in the process of removing such objects from exhibit and replacing them with "*in-kind*" items not subject to NAGPRA constraints. Final distribution and location of these objects will be determined through consultations with appropriate American Indian groups.

Summary of Media Problems and Needs

The monument's parkwide needs are much greater than simply updating exhibit/media techniques. The entire approach to park interpretation needs to be fundamentally different--both in "broad stroke" concepts and details of fact.

General Parkwide Concerns. The new generation of parkwide interpretive media for Wupatki National Monument must acknowledge and reflect the following:

- o the greatly expanded park information base gained from the 1981-1988 parkwide Wupatki archeological survey/inventory;
- o the new cultural interpretation derived from the analysis of that new data base;

- new interpretations of the prehistoric lifestyles in the entire region surrounding Wupatki, by numerous recognized contemporary archeologists.

The current interpretation of prehistoric cultural lifestyles at Wupatki fails to communicate the concept that the prehistory and history of this region is actually a matter of a continuum of culture with present-day American Indians. It further fails to communicate the idea that although these people no longer physically live in the monument, and continue to maintain a spiritual and cultural affinity with this land and return frequently to visit the sacred sites. Therefore, the various periods of traditional use may appear to be "temporary" in nature but American Indians never consider the area to be abandoned.

This "new look" in Wupatki interpretation will need to reflect the following:

- that although life at Wupatki was admittedly quite difficult (by today's standard), it may have been no more difficult than living at other major prehistoric cultural areas, such as Chaco, Mesa Verde, Snaketown, and Casa Grande;
- that although Dr. Colton's concepts of Sinagua lifeways in the Wupatki region--including the *short volcanic eruption period, land rush* and *cultural frontier* theories--should be acknowledged as an historical interpretation of this site, much greater emphasis needs to be placed on the more contemporary interpretations espousing such concepts as a *two century volcanic eruption period [rather a brief four-year eruption period]*, *localized population shifts or migrations [rather than "land rush"]*, and *an area of cultural interface among several indigenous prehistoric groups [rather than a "cultural frontier"]*;
- that several modern American Indian neighbors--particularly the Hopi and Diné [or Navajo]--have traditional interests in and/or ties to these Wupatki lands; *Note: The existing relationships which the park superintendent and his staff have established with the Diné [Navajo] and Hopi Nations involve them in the park's planning, preservation, interpretation, and education programs; and thus enriching the quality of the monument's interpretive programs and services;*

- that the interpretation of monument's cultural prehistory and history must be balanced by the presentation of resource preservation messages necessary to promote appreciation for and protection of these irreplaceable, nonrenewable cultural resources;
- that the cultural landscapes created by human adaptations to their surrounding natural environment should be much more graphically depicted and presented.

Should other planning and/or management decisions open previously closed portions of the monument to visitors, informational and interpretive programs need to be established to communicate essential information to assist visitors in responsible use of these backcountry lands and resources. It would be especially important to do so upon the establishment of a contemplated new backcountry use/management/permit system, to assist in accommodating increasing visitor requests and sensitively distributing the ever increasing number of park visitors over a broader area of the monument.

Wupatki Visitor Center. Although the three-decade-old interpretive media of the monument's visitor center is outdated and outmoded, the extensive rehabilitation of its interpretive message(s) involves much more than merely updating exhibit presentations and techniques. In addition to all of the above *general concerns* which apply to the visitor center's future needs, facility specific needs and concerns are related below.

Consideration most likely will need to be given to redesign of public space within the visitor center, and perhaps even the removal of non-loadbearing partitions.

During our onsite visit, concern was expressed that prehistoric textiles, pictographs and petroglyphs are at least underrepresented--if not underrepresented--in the visitor center exhibit area.

The interpretation of the exhibited material culture artifacts needs to be more *humanized*, to balance--but not replace--the myriad of scientific analysis details.

Any new exhibits need to reflect an acknowledgement that research is ongoing at the monument, that answers are being pursued on a continuing basis, and frankly "*we do not have all the answers yet*" and probably will never reach such a stage. We need to acknowledge that the "process" of cultural study is often just as important as the "conclusions"--if not more so. For example, in the "process" of conducting the monumentwide archeological inventory, Bruce Anderson began to ponder the question of why the Lomaki pueblos area has significantly greater site density than the remainder of the monument. One of the plausible explanations is that this area experienced significantly greater average annual precipitation during prehistoric times. That climatic factor became an important determining factor for prehistoric occupation and settlement patterns. It seems that only continued research into the precise climate information during prehistoric times will answer such a question.

In the absence of a dedicated audiovisual theater or space in the visitor center, serious consideration should be given to integrating appropriate audiovisual clips and segments into the new exhibits.

Since research is a continuous activity at the monument and within its surrounding region, some form of a rotating or temporary exhibit area would be most useful to provide a focus on the findings of research and/or the current status of research.

Wayside Exhibits and Publications. Since the existing wayside panels are--at best--a random group of exhibits, the monument needs a parkwide wayside exhibit system. Such a system should have uniformity of design and a compatible blending of design elements and features with the surrounding scenes and environment.

The monument would also greatly benefit by the development of a select series of park-specific publications, including:

- a rewritten, redesigned Wupatki Pueblo trail guide [for onsite loan use or for purchase];
- a general pictorial work about the park [sales publication];

- more topical guides and checklists [for free distribution];
- a creative children's activity book—*not merely a coloring book*, perhaps in combination with the other two areas in the Flagstaff Areas management group [sales publication].

Collections Care Concerns. Although this document is not the appropriate place to initiate actions to improve the management and care of the monument's museum and archival collections, it is important to note that the nature and level of care and use of these collections directly affects the use of those artifacts for interpretive exhibits. Therefore, it is most appropriate to support the proposed central curatorial storage and management facility for the artifact, archival and library collections of all three monuments in the Flagstaff Areas management group. Such an action will allow responsible maintenance of these collections in an environment with controlled temperature and humidity.

THEMES AND OBJECTIVES

Interpretive Themes

These interpretive themes were specifically developed by the planning team during an onsite visit in June 1993, and represent refinements upon statements contained in the *1994 Annual Statement for Interpretation for the Flagstaff Areas of the National Park Service*.

It is appropriate to note that the monument's resources are rich enough to interpret a considerable spectrum of *cultural diversity* that so dramatically conveys the essence of the interpretive themes stated below.

Interpretive Themes:

- ▶ The different puebloan people at Wupatki, known to archeologists as the Sinauga, Anasazi, and Cohonina at Wupatki, although culturally different and distinct, coexisted and interacted successfully.
- ▶ Physical elements of the puebloan people are preserved at Wupatki and offer insights about the history of their descendants, the Hopi people.
- ▶ After the Puebloan people moved on, the Diné [the Navajo] arrived with a different culture, which is still present in the Four Corners area.
- ▶ Settlers from the United States and Europe have had their own effect on the nature of land use and the cultural landscape (at Wupatki).

- ▶ The natural environment and patterns of human activity have interacted to produce the distinctive natural and cultural landscape that exists at Wupatki National Monument.
- ▶ Wupatki National Monument preserves an extensive record of the evolution and diversity of the Colorado Plateau.

Management Objectives for Interpretation and Visitor Use

A listing of management objectives applicable for interpretation and visitor use at Wupatki National Monument has been compiled from the *Statement for Management: The Flagstaff Areas: Wupatki, Sunset Crater Volcano, and Walnut Canyon National Monuments [approved October, 1994]*. Specifically, these objectives are:

- ▶ To utilize the natural, cultural and human resources of the monuments for the recreational and educational enjoyment of visitors;
- ▶ To provide adequate visitor services and facilities consistent with safety and resource preservation;
- ▶ To communicate the story of the prehistoric culture, of Sunset Volcano, and the ecology of the monument to the visitors;
- ▶ To protect and preserve the prehistoric, historic and natural resources of Wupatki National Monument to the maximum extent possible;
- ▶ To formulate long-range plans based on sound research for preservation of natural and cultural resources;
- ▶ To identify, monitor, and manage the monuments' cultural and natural resources as required to provide quality visitor education and experiences, and ensure the preservation of those resources;

- ▶ To maintain liaison and cooperative relationships with groups such as the Navajo and Hopi Nations, United States Forest Service, Arizona Game and Fish, Northern Arizona University, Museum of Northern Arizona, Arizona Land Department, Coconino County, City of Flagstaff, and others who share interests in the monument and surrounding area;
- ▶ To keep the public informed of and involved in the operations of the monument;
- ▶ To coordinate planning, development and management activities with others to share expertise and ensure compatible uses of adjacent lands.

THE VISION, OR DESIRED VISITOR EXPERIENCE

In the process of generating a comprehensive planning strategy to guide the vision for interpretive directions as well as the media treatments of this plan, the following *Desired Visitor Experience* objectives were developed during the onsite planning team visit:

- ▶ Early in their visit, visitors need to understand the opportunities/options available along the Sunset Crater Volcano/Wupatki Loop Drive [FS 545];
- ▶ Visitors should see/experience at least one prehistoric architectural feature in the monument;
- ▶ Visitors will be encouraged to visit Walnut Canyon and Sunset Crater Volcano National Monuments to gain opportunity to relate Walnut Canyon and Sunset Crater Volcano to the archeological resources of Wupatki National Monument;
- ▶ Visitors should have the opportunity to understand the relationships of these archeological resources to the other archeological resources of the region, especially Walnut Canyon;
- ▶ Visitors are introduced to the two major American Indian groups of the area--the Diné [Navajo] and the Hopi, as well as to the prehistoric Puebloan peoples, known to the Hopi as the Hisatsinom [*which specifically included the Cohonina, Anasazi, Sinagua, and Hohokam*];
- ▶ Visitors are introduced to the natural environment of the area and how people have altered that environment--prehistorically, historically, and presently;

- ▶ Visitors will be provided with information/interpretation about the inhabitants who lived here then (in the region, not just in the Wupatki Basin); further, they would have the opportunity to understand both the connectivity of neighbor groups as well as the distinctions between them;
- ▶ Visitors are introduced to and have opportunity to understand the relationships of modern Indian inhabitants of the Greater Southwest area with the Puebloan peoples of Wupatki;
- ▶ Visitors will be given opportunity to understand that the Wupatki Basin inhabitants were part of a much larger living community; therefore, they knew their neighbors and were interdependent upon them, were socially related and organized with them, and were part of a "continuum" through time and spatial proximity;
- ▶ Provide opportunities for visitors to understand/discover the relevance of this site and its resources to themselves;
- ▶ Visitors will have a safe experience/visit;
- ▶ Visitors, academicians, and NPS employees will exhibit appropriate behavior toward and make wise use of the monument's extensive archeological sites and resources;
- ▶ Understanding and support of the National Park Service's research and preservation goals will be promoted among visitors;
- ▶ The interpretive media, programs and services will not be developed in a "vacuum"; rather the Service will continue to promote and participate in cooperative consultations and partnerships to keep current in cultural resource management and related interpretive matters;
- ▶ Park visitors and potential visitors have the benefit of ongoing outreach programs, which include: personal services in the areas in and immediately around Flagstaff, and nonpersonal services beyond those areas;

- ▶ Visitors will be given adequate information to understand the similarities and differences of the missions of the National Park Service and the United States Forest Service;
- ▶ Visitors will gain an understanding of and will begin to identify with the people who lived here and their relationships with the environment;
- ▶ All interpretation provided for visitors will reflect current, accurate, balanced information; it should be provided in fluid, dynamic presentations; it should also be provided for differing levels of visitor interest, understanding and sophistication--including children.

IMPLEMENTATION OF THE VISION

This plan proposes interpretation, orientation, and informational media treatments for the following facilities, program areas, and needs which will implement the interpretive vision for Wupatki National Monument:

- Wupatki Visitor Center;
- Parkwide Wayside Exhibit System;
- Publications.

Wupatki Visitor Center

The partition separating the lobby from the exhibit area in this visitor center does not appear to be a load-bearing wall. Therefore, it is recommended that most or perhaps all of that separating partition be removed to allow a much greater flexibility for planning and design of the entire 360-square-foot public use area.

Adequate space, furnishings, and fixtures for the information/orientation desk and a cooperating association display/sales area functions must be included in this planning and redesign of the public space in the Wupatki Visitor Center.

General Concepts and Points of Emphasis. The major interpretive treatment goal for this visitor center will be to *present and interpret a continuum of culture which should be expressed in terms of daily life human experiences.*

Particular planning considerations need to be given to a treatment concept that would begin with current cultures and work back to the time of the Hisatsinom. Another way of expressing this particular treatment idea or concept is that *Wupatki has become a "window of continuity—from the present into the past."* Visitors should be given the opportunity to view Wupatki's broad spectrum of cultural activity.

When planning and designing for this center's general "visitor flow," it will be best to base planning on the general concept of *inviting visitors along on a "discovery trip."* However, the trip must have an open, flexible itinerary or agenda. That is, exhibits will need to be planned and designed in a way that would not require them to be seen or experienced in *any* specific sequence.

Many topics, with supporting display artifacts, can be integrated into this overall exhibit concept. These could and should include:

- ceramics;
- textiles;
- lithic objects;
- trade items, both imports and exports;
- trade routes;
- personal and domestic life ways, featuring articles and implements;
- architecture types, styles and features;
- rock art, both petroglyphs and pictographs.

It would be appropriate to note that this strategy may be the responsible means to successfully allow the programmatic access to this rock art without being site-specific. Such an approach would avoid revealing specific locations, which is necessary for the protection and preservation of fragile, vulnerable cultural resources.

A series of resource protection preservation messages should be integrated throughout these exhibits. A specific example might be that removal of artifacts from their "*in situ*" locations significantly reduces the possible knowledge which might otherwise be gained from such sites--sometimes

reduced quite dramatically! This, of course, is true because it would destroy the otherwise available context, or *provenience*, in which the objects are found.

Throughout the exhibit area, and elsewhere in parkwide interpretive media, the idea or concept that interpretation of the lifeways and culture(s) of the Puebloan peoples and their successors is dynamic, not static, must be communicated. Further, it is equally important to interpret the concept that dynamics of culture needs to be presented in creative ways which will foster an integrated understanding of place, ecology, and human processes in the Wupatki region. To support this concept, it will be essential to "weave" the following inclusive ideas in exhibits throughout the visitor center:

- the *process of "discovery"* of the culture and lifestyles of the prehistoric residents of this region is *much more important than the conclusion(s)*, because conclusions are quite often fluid and subject to change and periodic revision;
- it is a reality, specifically and emphatically, that researchers are pursuing *answers on a continuing basis*, and we really don't have a *monopoly on all the answers!*
- that because the process is more important than the conclusions, and that research about the region's prehistoric cultures is constantly on-going, provision should specifically be made for some type of a *rotating or temporary exhibit space featuring current research efforts.*

In the absence of a dedicated audiovisual area within the visitor center, it is appropriate to integrate some audiovisual segments or brief program into the exhibits.

Specific Exhibit Concepts or Ideas. The detailed planning of exhibit topics and details will await the future attention of an exhibit planner/designer team. However, several specific ideas or concepts are offered here for future consideration.

As much as possible, exhibit(s) will need to *humanize* the elements of material culture. For example, consideration should be given for the

inclusion of an exhibit on prehistoric ceramics using a dual presentation level approach. Both the human aspect and the scientific analysis aspect should be presented and interpreted. A possible treatment might be as follows:

- *the human side:* the process of the designing and painting of decorated ceramic pots; an exhibit which combines a few selected decorated pots with a short (about 1 to 1-½ minutes long), silent [perhaps captioned] video program graphically depicting the process could be most appropriate;
- *the scientific analysis side:* an exhibit which analyzes and illustrates the great multiplicity of pottery types, series, varieties, traditions, etc.

Some type of an exhibit of human adaptations to the natural environment would be an absolute necessity. It should feature as great a variety of illustrative examples as possible. As a suggestion, we envision such an exhibit using the general concept of "*a view window into the past.*" It would need specifically to treat the question of the survival of individuals, as well as the survival of society, in an existence that at times--perhaps many times--became marginal. This exhibit topic might lend itself well to multimedia interactive video program approach. Planning and design of such a program should consider, but not be limited to the following topics or subjects:

- the terminology used by modern historians and social scientists to describe the inhabitants of the Wupatki area--past and present--and their lifeways;
- prehistoric pottery types and designs, and what they can tell us about those peoples;
- why did these prehistoric puebloan peoples live here? was it by choice? if so, why? If not, what were the involuntary reasons for them being here?
- how did these puebloan peoples support [food, clothing, shelter, decorative items, amenities, etc.] themselves?

Closely associated with an exhibit on adaptation to natural environments, would be interpretation of the daily process of "living with the land" in prehistoric times. Such exhibits should depict human adjustment to the features of the landscape--interpreting *both successes and failures*, and, in turn, their impacts on the land--*both positive and negative*. Planning and design of such an exhibit might well involve any or all of the following:

- the use of graphics and models [because of the possible unavailability of appropriate original artifacts];
- the use comparisons of physical evidence, with conclusions about by-gone lifeways to present plausible options; perhaps climaxing with a challenge to visitors to respond to the query, "What do you think?"
- some aspects of this topic might be most appropriately and succinctly presented with simple short--probably silent, but captioned --video; for example, such a program could focus solely on the significant amount of effort needed for an inhabitant to simply obtain and transport water from the Little Colorado River to their pueblo.

Parkwide Wayside Exhibit System

In the absence of an existing comprehensive parkwide wayside exhibit system, a complete new interpretive/orientation wayside system needs to be planned, designed, produced, and installed for both Wupatki National Monument and the entire length of the loop drive serving both Sunset Crater Volcano and Wupatki National Monuments (Forest Service Road 545) [See *Map 2: Proposed Wayside Exhibits, Wupatki National Monument and FS 545*, on page 37, for the locations of these proposed wayside exhibits. **Note:** the index letter following each proposed wayside exhibit in this text corresponds with its location on Map 2.]

Summary of System Concepts and Details. This new wayside exhibit system approximately will include: eight upright orientation panels; eight standard bulletin board cases; and 45 site-specific, low profile interpretive easel panels. Please note, a few orientation panels will be included in this low profile format.

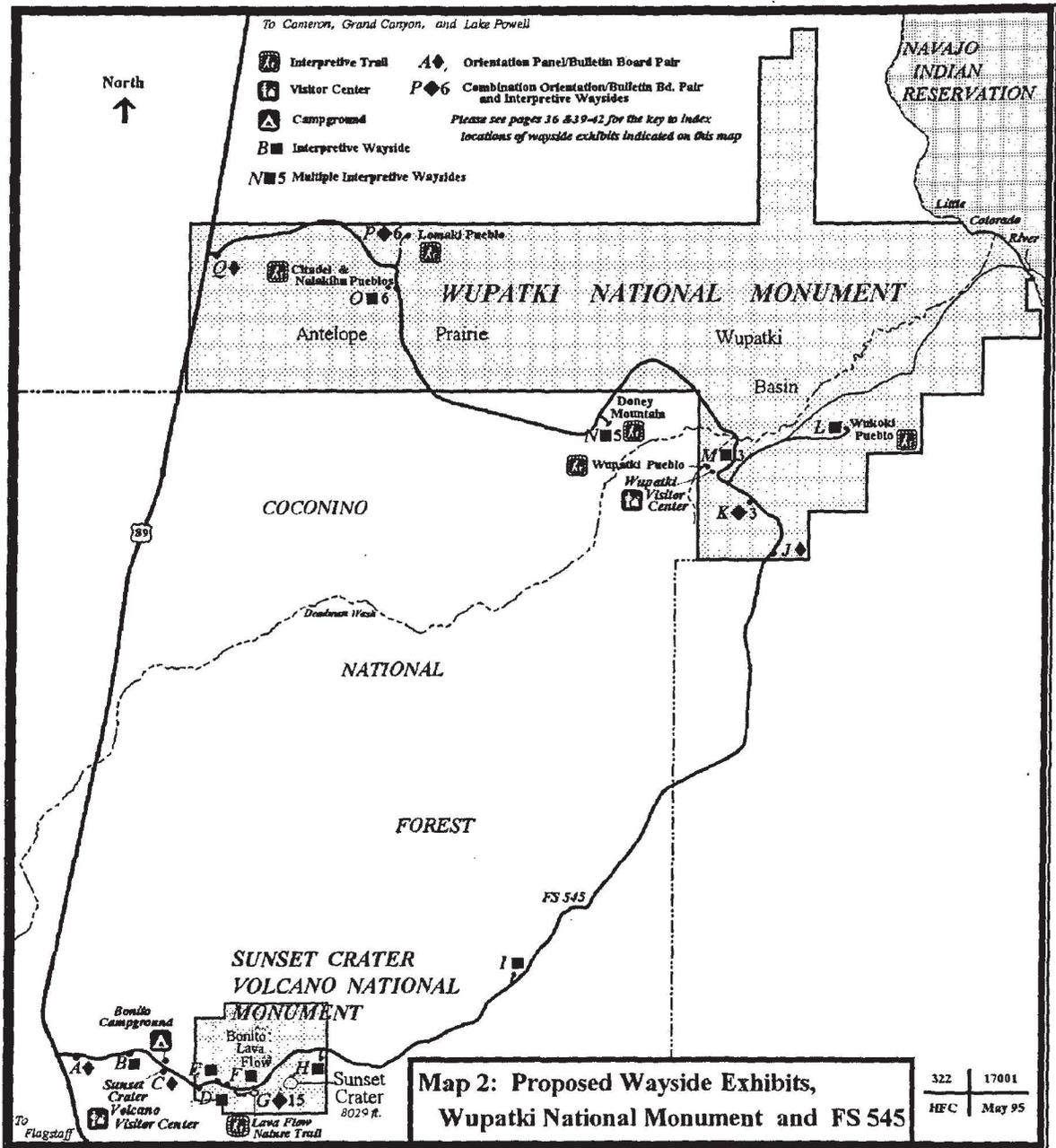
All exhibits in this new system will be standard fiberglass embedded panels. The colors used in design/layout of each of the panels will be selected to blend compatibly with the surrounding scenes and environment. Most of the wayside panels will include some form of a safety message. Additionally, many of the panels will contain some type of resource protection/preservation message.

Orientation Wayside Panel/Bulletin Board Units. Each of these eight units of orientation/bulletin board panels will be installed along the Sunset Crater Volcano/Wupatki Loop Drive [FS 545], as listed below:

- retain the *three upright parkwide orientation panel and bulletin board case units* recently produced and installed; one unit each at the north [Q] and south [A] entrances to FS 545, and one unit at the south entrance to Wupatki National Monument [J];
- plan and produce *four more upright parkwide orientation panel/bulletin board case units*; each of the orientation panels will be a duplicate of the layout of those recently installed [see above], except for changing the "You are Here" identifier; one pair each will be located at:
 - Sunset Crater Volcano National Monument Visitor Center porch [C],
 - Heiser Springs Pithouses Complex parking area [K],
 - Wukoki parking area [L],
 - Lomaki parking area [P];
- plan and develop *one additional upright, site-specific orientation panel/bulletin board unit* for the Sunset Crater Volcano's Lava Flow Nature Trail parking area [G]; it would distinctively be an orientation wayside with a site-specific map for the self-guiding trail.

Interpretive Exhibit Panels. Each of these 45 site-specific interpretive wayside exhibits will be a standard, low profile panel.

The listing which follows, generally organized as if travelling from south to north along FS 545, provides the location and brief details of interpretive content for each exhibit panel. Additionally, the themes, goal, and objectives for the Lava Flow Nature Trail within Sunset Crater Volcano National Monument are included at the appropriate place.



- *Bonito Park [B]* – located at turnout for Bonito Park; will interpret the "park," both as a natural forest opening and an important Hopi cultural site; also will include a panoramic viewshed graphic of the peaks on the horizon with identifying labels--from Sunset Crater Volcano on the left to the main San Francisco Peaks cluster and perhaps SP Crater on the right;
- *Railroads and Timber Industry at Sunset Crater Volcano [D]* -- located at east boundary of Sunset Crater Volcano National Monument, at the entrance sign pullout and adjacent to the old railroad bed segment; will interpret the use of railroads in this area's logging industry during first half of the 20th century;
- *Bonito Lava Flow Overlook [E]* – descriptive overlook, located at first lava flow stop, placed at end of short trail leading from the parking area [*trail to be outlined with rocks, etc., to control access for safety and resource protection*];
- *Bonito Lava Flow Trailhead/Overlook [F]* – located at second lava flow stop, will be a combination of a descriptive overlook (*near the center of the parking lot edge*) and an introduction to the trailhead (*including directions for visitors to the trailhead at the east end of the parking area, to begin the short trail leading to the edge of the lava flow*);
- *Sunset Crater Volcano Self-Guiding Lava Flow Loop Trail [G]* – in addition to a site-specific, upright trailhead orientation panel/bulletin board unit [see page 36]; this series of 15 trailside wayside easel panels, with its interpretive goal, themes, and objectives for the trail, are itemized by title or topic as follows:

Interpretive Goal: The Lava Flow Nature Trail provides visitors with a safe, accessible, and graphic example of the Bonito Lava Flow; so that they may gain a better understanding of the natural forces at work upon the San Francisco volcanic field and Sunset Crater Volcano and adaptations to them.

Interpretive Themes:

- *Sunset Crater Volcano began erupting in 1064 and continued to do so sporadically for about 200 years;*

- *Lava flowed from the base of the cinder volcanic cone, and formed the lava field existing today;*
- *Forces of nature continue to change this landscape;*
- *Plant and animal life of Sunset Crater Volcano evolved and adapted to local conditions and is significant to the ecology of the entire region;*
- *Indigenous peoples of the Sunset Crater Volcano area were greatly affected by local geological events and adapted to the numerous changes imposed on their environment.*

Objectives: To interpret the geological events, the plant and animal life, and the indigenous peoples of the Sunset Crater Volcano area, placing them in context within the larger setting of the San Francisco volcanic field.

Individual Trailside Interpretive Panels for Sunset Volcano Lava Flow Loop Trail:

- Trail Intersection panel -- *to identify and explain both trails--the shorter Disability Accessibility trail, and the longer Lava Flow Loop trail;*
- Collapsed Lava Tube
- Lava Types and Textures
- Xenoliths -- Pieces of the Past
- Collapsed Lava Flow
- Prehistoric People of Sunset Crater Volcano
- Vegetative Regrowth of Lava Flows
- Old Sunset Crater -- *Visitor Patterns/Activities of Bygone Years*
- Undercurrents
- Miniature Volcanoes
- Tornados
- Lava Flows
- Close-up: Two Types of Lava -- A'a and Pahoehoe
- Squeeze-Ups
- Lava and Cinder Colors;

- *Cinder Hills Overlook [H]* – Orientation to the viewshed; also to interpret the difference between the resource management missions of the NPS and the USFS, the latter of which permits selected ORV recreational driving, and the evidence (*often the actual activity, as well*) and impact of which is quite visible from this overlook;
- *Painted Desert Vista [I]* – To interpret both: the diversity of the Colorado Plateau, featuring the Painted Desert in the distance; and C. Hart Merriam's *Biotic Life Zones* concept [*developed by him in the San Francisco Peaks/Flagstaff area*];
- *Heiser Spring Pithouses Complex [K]* – In addition to the parkwide orientation panel/bulletin board unit (see page 36 above), three low-profile easel wayside panels will be needed to interpret this early occupation site after the site is made responsibly exhibitable [*perhaps by providing a protective shelter over the re-excavated site*]. A **strong** resource preservation/protection message needs to be included in these panels. Specifically, these should be: one trailhead panel, and two interpretive panels, each interpreting a key component of the feature;
- *Wukoki Pueblo Site [L]* – Only an interpretive panel located along the trail, near the base of the pueblo, will be needed here. Note: No trailhead panel will be needed here, because the structure "invites" visitors – on its own, quite well ... without need for additional trailhead invitation;
- *Wupatki Pueblo [adjacent to the Wupatki Visitor Center] [M]* – Only a total of three panels will be needed here, two of which have been recently produced and shipped to the park for installation--*Ballcourt* and *Blow Hole*; the third panel will be the site overlook wayside [at stop #1], succinctly interpreting the pueblo; we suggest a long, thin wall mounted panel, with a graphic depicting human activity within the pueblo at the zenith of its use and occupation, and perhaps sensitively identifying the major visible features of the site;
- *Doney Mountain Picnic Area and Scenic Trail [N]* – Will need a total of five low profile panels: one trailhead; two site-specific interpretive panels along the trail; and one at the summit; plus a duplicate of the summit panel for the other summit crest to the right (west);

- *Citadel Pueblo Complex [O]* – Will need a total of six low profile panels for this complex: one trailhead; and five site-specific interpretive panels, as follows [*Note: safety issues on the trail and at the summit will need to be addressed*]:
 - *Nalakihu Pueblo*
 - *terrace farming*
 - *prehistoric communities*
 - *the adjacent sink hole natural feature*
 - *mesa top pueblo, which needs a strong resource preservation/ protection message;*

- *Lomaki Pueblos Area [P]* – Will need a total of seven panels within this pueblos complex, as follows:
 - *upright parkwide orientation panel/bulletin board unit (see description on page 36 above); [*Note: orientation panel needs some site-specific information interpreting the relatively dense population of this locality*]*
 - *Box Canyon Pueblos*
 - *Ancient Landscapes*
 - *Lomaki Pueblos*
 - *Daily Life*
 - *Sunset Crater Volcano – interpreting its significance to ancient Indian life in the region*
 - *Dry-land Farming.*

Publications

At present, a reasonable selection of publications and associated interpretive materials is available at the visitor center orientation/information desk and from Southwest Parks and Monuments Association's [SPMA] sales facility. However, the monument's interpretive program will be greatly benefitted by the addition of several site-specific publications and interpretive materials described in this section.

With the recent publication of a general interpretive booklet by Southwest Parks and Monuments Association, perhaps the most important remaining publications needs for the monument would be a rewritten, redesigned self-guiding trail booklet for the Wupatki Pueblo area. This booklet would

continue to be used by visitors on a "use and return" basis and/or purchase, if visitors wish to take it home. A specific central theme needs to be designated for the booklet; most likely from either of the following: the extensive agricultural and trade pattern efforts needed to support a residential pueblo of this size and complexity, and/or this geographic area as a cultural crossroads, or a place for the blending of prehistoric cultures.

A general pictorial work illustrating Wupatki would also be most desirable. The content of the publication should be guided by such concepts as "images of Wupatki" or "patterns of the past." Either of these concepts might be used in the title for the publication.

Site bulletins or guidebooks for several site-specific topics need to be developed and published for Wupatki. These should include, but not necessarily be limited to reptiles, ethnobotany, and rock art [pictographs and petroglyphs].

Several monument-specific checklists need to be developed and published. Checklists should be developed for at least the following topics: birds; reptiles/amphibians; plants/trees; and mammals. Each should be keyed to existing publications about the American Southwest, most of which would be SPMA titles.

The video interpreting Meso-american ballcourts, now under production through the cooperative effort of several organizations [including Northern Arizona University, the Museum of Northern Arizona, and the National Park Service] in the Flagstaff area, will be a very worthy addition to the interpretive materials sales inventory at Wupatki.

Wupatki, along with the other two NPS Flagstaff areas, lacks a quality children's activity book. We suggest the production of such a sales publication for the combined areas [Wupatki/Sunset Crater Volcano/Walnut Canyon]. As previously stated, such a publication needs to be a *true activity book, not just a coloring book!*

SUMMARY OF INTERPRETIVE THEME TREATMENT IN INTERPRETIVE MEDIA

In this section, each of the park's six interpretive themes will be restated, and followed with an outline of the specific proposed media treatment which will be used to interpret that particular theme.

The different puebloan people at Wupatki, known to archeologists as the Sinauga, Anasazi, and Cohonina, although culturally different and distinct, coexisted and interacted successfully;

Treatment via:

- ▶ visitor center exhibits;
- ▶ some audiovisual elements integrated into exhibits;
- ▶ some interpretive publications;
- ▶ personal interpretive services.

Physical elements of the puebloan people are preserved at Wupatki and offer insights about the history of their descendants, the Hopi people;

Treatment via:

- ▶ visitor center exhibits;
- ▶ some interpretive publications;
- ▶ personal interpretive services.

After the puebloan people moved on, the Diné [the Navajo] arrived with a different culture, which is still present in the Four Corners area.

Treatment via:

- ▶ visitor center exhibits;
- ▶ some interpretive publications;
- ▶ personal interpretive services;
- ▶ some interpretive wayside exhibits.

Settlers from the United States and Europe have had their own effect on the nature of land use and the cultural landscape (at Wupatki).

Treatment via:

- ▶ visitor center exhibits;
- ▶ some interpretive publications;
- ▶ personal interpretive services;
- ▶ some interpretive wayside exhibits.

The natural environment and patterns of human activity have interacted to produce the distinctive natural and cultural landscape that exists at Wupatki National Monument.

Treatment via:

- ▶ visitor center exhibits;
- ▶ audiovisual elements integrated into exhibits;
- ▶ some interpretive publications;
- ▶ personal interpretive services;
- ▶ many interpretive wayside exhibits.

Wupatki National Monument preserves an extensive record of the evolution and diversity of the Colorado Plateau.

Treatment via:

- ▶ some interpretive publications;
- ▶ personal interpretive services;
- ▶ some interpretive wayside exhibits.

ADDITIONAL PLANS AND STUDIES NEEDED TO FULLY IMPLEMENT THIS PROSPECTUS

To fully support and implement this interpretive prospectus, there are several studies and plans now in progress as well as projected several studies which need to be completed.

Completion of Plans and Studies In Progress. This plan supports and urges the completion of two studies now in progress which will provide invaluable new baseline study information to support the development of the interpretive media and programs proposed in this prospectus. The "*Ethnographic Overview of the Flagstaff Areas*", begun in April 1993, will provide additional subject matter base information. The "*Assessment of Visitor Experiences at Three Anasazi Cultural Parks: Chaco Culture, Mesa Verde, and Wupatki*," with field work conducted during the summers of 1992 and 1993, will furnish much more detailed information about visitor use at Wupatki than is presently available.

As support for responsible care of artifacts to be included in the interpretive exhibits, the completion of the "*Collection Management Plan for Flagstaff Area Parks*," begun in September 1992, and its recommended companion "*Collection Storage Plan*" would be most useful and appropriate. Such documents should reflect adaptations necessary for accommodation in the new GSA building which will serve as park headquarters.

Additional Plans and Studies Needed. Replacement of the inadequate, outdated 1982 *Scope of Collection Statement for Wupatki and Sunset Crater National Monuments* with an updated, comprehensive document for the entire Flagstaff Areas group would provide much needed support information for this prospectus.

Two other studies, the need for which has been identified in the current *Statement for Management: Flagstaff Areas*, have distinct potential to yield important baseline information which would need to be considered in the process of implementing this prospectus.

The first of these two studies would develop essential baseline information "to support management decisions regarding earth fissures, 'blow holes', and ice caves." Integral to this study would be identifying and compiling information about the traditional use of these "special places" by Hopi and Diné or Navájo Indians, which in turn will be most useful in developing sensitive, responsible interpretation about these places.

The second would be a more broad-based study of similar circumstances. Such a study would identify and document the American Indian uses of natural resources throughout the monument, to facilitate responsible yet sensible, nondetrimental use of the resource. This same information would be most helpful in assuring sensitive, responsible development of interpretive media and programs.

SELECTED REFERENCES

- Ambler, Richard. *The Anasazi*. Flagstaff, AZ: Museum of Northern Arizona, 1989.
- Anderson, Bruce A. *Archeological Inventory/Survey, Wupatki National Monument*. Flagstaff, AZ: National Park Service, Flagstaff Areas, December, 1990.
- _____. *Pre-Stabilization Archeological Excavations for Heiser Springs Pithouses (NA 1754), Wupatki National Monument, Arizona*. Santa Fe, NM: National Park Service, Southwest Cultural Resources Center, August, 1980.
- Barnes, F.H., and Michaelene Pendleton. *Prehistoric Indians*. Salt Lake City: Wasatch Publishing Co., 1979.
- Bateman, Gary C. *Natural Resource Survey and Analysis: Sunset Crater and Wupatki National Monuments: Final Report [1976-1981]*. Flagstaff, AZ: Northern Arizona University, 1981.
- Breternitz, David A. "The Eruption(s) of Sunset Crater," *Plateau: Magazine of the Museum of Northern Arizona*. Volume 40, Number 2 [1967].
- Brown, William E., Carla Martin, and Erni Escalante. *People of the Stone Villages - Life Way of The Ancient Sinagua*. Globe, AZ: Southwest Parks and Monuments Association, 1973.
- Colton, Harold Sellers. "The Effect of a Volcanic Eruption on an Ancient Pueblo People," *Geological Review*. Volume 32, Number 4 [1932].
- _____. "The Eruption of Sunset Crater as an Eyewitness Might Have Observed It," *Museum Notes, Museum of Northern Arizona*. Volume 10, Number 4 [1937].
- _____. "Prehistoric Population of the Flagstaff Area," *Plateau: Magazine of the Museum of Northern Arizona*. Volume 22, Number 2 [1949].

Colton, Harold Sellers. "A Revision of the Date of the Eruption of Sunset Crater," *Southwestern Journal of Anthropology*. Volume 1 [1945].

_____. *The Sinagua: A Summary of the Archeology of the Region of Flagstaff, Arizona*. The Museum of Northern Arizona, Bulletin 22. 1946.

Colton, Mary Russell. "Legends of the Sunset Crater Region," *Museum Notes, Museum of Northern Arizona*. Volume 5, Number 4 [1932].

Chronic, Halka. *Roadside Geology of Arizona*. Missoula, MT: Mountain Press Publishing, 1983.

Fish, Paul R., Peter J. Pilles, Jr., and Suzanne K. Fish. "Colonies, Traders, and Traits," *Current Issues in Hohokam Prehistory*. Proceedings of a Symposium. Arizona State University Anthropological Research Papers, Number 23, 1980.

Gratz, Kathleen E., and Peter J. Pilles, Jr. *Sinagua Settlement Patterns and Organizational Models: A Trial Survey*. A paper presented at the Southwestern Anthropological Association. 1979.

Hartman, Dana. "A Chronicle in Wood and Stone: An Archaeologist Views the Wupatki-Sunset Crater Region." *Plateau: Magazine of the Museum of Northern Arizona*. Volume 49, Number 2 [1976].

Hevly, Richard H., Roger E. Kelly, Glenn A. Anderson, and Stanley J. Olsen. *Comparative Effects of Climatic Change, Cultural Impact, and Volcanism in the Paleoecology of Flagstaff, Arizona, A.D. 900-1300, Volcanic Activity and Human Ecology*. Orlando, FL: Academic Press, 1979.

House, Dorothy A. *Roden Crater*. Flagstaff, AZ: The Museum of Northern Arizona Press, 1988.

Kelly, Roger E. "Diminishing Returns: Twelfth and Thirteenth Century Sinagua Environmental Adaption in North Central Arizona." Unpublished manuscript, 1971.

Krutch, Joseph Wood. *The Paradox of a Lava Flow*. Globe, AZ: Southwest Parks and Monuments Association, 1976.

Lamb, Susan. *Wupatki National Monument*. Tucson: Southwest Parks and Monuments Association, 1995.

Lee, Martha, and Douglas Stephens. *Assessment of Visitor Experiences at Three Anasazi Cultural Parks: Chaco Culture, Mesa Verde, and Wupatki: Stage I Results*. Flagstaff, AZ: Northern Arizona University, January, 1993.

Lister, Robert H., and Florence C. *Those Who Came Before*. Tucson: Southwest Parks and Monuments Association, 1983.

McGregor, John C. *The Cohonina Culture of Northwestern Arizona*. Urbana, IL: University of Illinois Press, 1951.

_____. *Culture of Sites Which Were Occupied shortly Before the Eruption of Sunset Crater*. The Museum of Northern Arizona, Bulletin #9, 1936.

Malotki, Ekkhart. *Earth Fire*. Flagstaff, AZ: Northland Press, 1987.

National Park Service. *Annual Statement for Interpretation for the Flagstaff Areas of the National Park Service*. Flagstaff, AZ: National Park Service, Flagstaff Areas, 1994.

_____. *General Management/Development Concept Plan: Wupatki and Sunset Crater National Monuments*. Denver: National Park Service, Denver Service Center, June, 1982.

_____. *Statement for Management, The Flagstaff Areas: Wupatki, Sunset Crater Volcano, and Walnut Canyon National Monuments*. Flagstaff, AZ: National Park Service, Flagstaff Areas, December, 1994.

Nations, Dale, and Edmund Stump. *Geology of Northern Arizona*. Dubuque, IA: Kendall/Hunt Publishing Co., 1981.

Noble, David Grant. *Ancient Ruins of the Southwest*. Flagstaff, AZ: Northland Press, 1981.

Pike, Donald. *Anasazi*. Flagstaff, AZ: Museum of Northern Arizona, 1977.

Pilles, Peter J., Jr. "The Field House and Sinagua Demography," *Limited Activity and Occupation Sites—A Collection of Conference Papers*. n.d.

_____. "Sunset Crater and the Sinagua: A New Interpretation," *Volcanic Activity and Human Ecology*. Orlando, FL: Academic Press, 1979.

Powell, Shirley, and George J. Gumerman. *People of the Mesa*. Tucson: Southwest Parks and Monuments, 1987.

Schroeder, Albert H. *Of Men and Volcanoes*. Globe, AZ: Southwest Parks and Monuments Association, 1977.

_____. "The Pre-eruptive and Post-eruptive Sinagua Patterns," *Plateau: Magazine of the Museum of Northern Arizona*. Volume 34, Number 2 [1961].

Thomas, David Hurst, Jay Miller, Richard White, Peter Nabokov, and Philip J. Deloria. *The Native Americans: An Illustrated History*. Atlanta: Turner Publishing, Inc., 1993.

Thybony, Scott. *A Guide to Sunset Crater and Wupatki*. Tucson: Southwest Parks and Monuments Association, 1994.

Vivian, Gordon. "Alcove House at NA 5700," *Plateau: Magazine of the Museum of Northern Arizona*. Volume 29, Number 1 [1956].

Wilcox, David R. *Portals to Prehistory: Mesoamerican and Southwestern Ballcourts*. Pueblo Grande Museum Profiles, Number 13. Phoenix: Pueblo Grande Museum and Cultural Park, 1993.

Wilcox, David R. *Pueblo III People and Polity in Relational Context*. Manuscript. Flagstaff, AZ: The Museum of Northern Arizona, November, 1992. [Will be included in *Pueblos in Transition: The Anasazi World, A.D. 1100-1300*, Michael Adler, editor – currently in press]

_____. *The Wupatki Nexus: Chaco-Hohokam-Chumash Connectivity, A.D. 1150-1225*. Manuscript. Flagstaff, AZ: The Museum of Northern Arizona, March, 1993.

Wilcox, David R., and Charles Sternberg. *Hohokam Ballcourts and Their Interpretation*. Arizona State Museum Archaeological Series, Number 160. Tucson: University of Arizona, 1983.

Wilcox, David R., and Phil C. Weigand. *Chacoan Capitals: Centers of Competing Polities*. Manuscript. Flagstaff, AZ: The Museum of Northern Arizona, April, 1993. [Paper presented at the "Comparing Capitals" Symposium, 58th Annual Meeting of the Society for American Archaeology, in St. Louis, April 15, 1993]

Wilson, John P. *The Sinagua and Their Neighbors*. Unpublished Ph.D. Dissertation. Cambridge, MA: Harvard University, 1969.

PARTICIPANTS IN THE PLANNING PROCESS

Core Team:

Bruce Anderson	<i>Retired Chief, Resources Management Division, Flagstaff Areas</i>
Winnie Frost	<i>Wayside Exhibit Planner, Harpers Ferry Center</i>
Sam Henderson	<i>Superintendent, Flagstaff Areas</i>
Bill Hudson	<i>District Ranger, Wupatki National Monument</i>
Jim Mount	<i>Exhibit Planner, Harpers Ferry Center</i>
Kim Sikoryak	<i>Former Interpretive Specialist, Southwest Regional Office</i>
Kim Watson	<i>Chief Ranger, Flagstaff Areas</i>
Tom White	<i>Interpretive Planner, Harpers Ferry Center, Team Captain</i>

Other Consultants and Participants:

Chris Downum	<i>Laboratory Director, Department of Anthropology, Northern Arizona University, Flagstaff, AZ</i>
George Esber	<i>Former Regional Ethnographer, Southwest Regional Office</i>
Sue Fischer	<i>Park Interpreter, Wupatki National Monument</i>
Tom Kleiman	<i>Chief, Audiovisual Arts Division, Harpers Ferry Center</i>
Todd Metzger	<i>Chief, Resources Management Division, Flagstaff Areas</i>
Peter Pilles	<i>Forest Archeologist, Coconino National Forest, Flagstaff, AZ</i>
Michael Stuckey	<i>Park Interpreter, Sunset Crater Volcano National Monument</i>

Other Consultants and Participants [Continued]:

Jerry Ward *Retired Chief, Audiovisual Arts Division, Harpers Ferry
Center*

David Wilcox *Chief Curator, Museum of Northern Arizona, Flagstaff, AZ*

APPENDIX:

**SPECIAL POPULATIONS PROGRAMMATIC ACCESSIBILITY
GUIDELINES FOR INTERPRETIVE MEDIA**

All new interpretive media shall conform with the September 1991 *Special Populations: Programmatic Accessibility Guidelines for Interpretive Media*, which is as follows:

**Special Populations:
Programmatic Accessibility
Guidelines for Interpretive Media**

National Park Service
Harpers Ferry Center

September 1991
[Version 2.1]

Prepared by
Harpers Ferry Center Accessibility Task Force

Contents

Statement of Purpose	55
Audiovisual Programs	56
Exhibits	58
Historic Furnishings	61
Publications	63
Wayside Exhibits	64

Statement of Purpose

This document is a guide for promoting full access to interpretive media to ensure that people with physical and mental disabilities have access to the same information necessary for safe and meaningful visits to national parks. Just as the needs and abilities of individuals cannot be reduced to simple statements, it is impossible to construct guidelines for interpretive media that can apply to every situation in the national park system.

These guidelines define a high level of programmatic access which can be met in most situations. They articulate key areas of concern and note generally accepted solutions. Due to the diversity of park resources and the variety of interpretive situations, flexibility and versatility are important.

Each interpretive medium contributes to the total park program. All media have inherent strengths and weaknesses, and it is our intent to capitalize on their strengths and provide alternatives where they are deficient. It should also be understood that any interpretive medium is just one component of the overall park experience. In some instances, especially with regard to learning disabilities, personal services, that is one-on-one interaction, may be the most appropriate and versatile interpretive approach.

In the final analysis, interpretive design is subjective and dependent on both aesthetic considerations, as well as the particular characteristics and resources available for a specific program. Success or failure should be evaluated by examining all interpretive offerings of a park. Due to the unique characteristics of each situation, parks should be evaluated on a case-by-case basis. Nonetheless, the goal is to fully comply with NPS policy:

"...To provide the highest level of accessibility possible and feasible for persons with visual, hearing, mobility, and mental impairments, consistent with the obligation to conserve park resources and preserve the quality of the park experience for everyone."

NPS Special Directive 83-3, Accessibility for Disabled Persons

Audiovisual Programs

Audiovisual programs include motion pictures, sound/slide programs, video programs, and oral history programs. As a matter of policy, all audiovisual programs produced by the Harpers Ferry Center will include some method of captioning. The approach used will vary according to the conditions of the installation area and the media format used, and will be selected in consultation with the parks and regions.

The captioning method will be identified as early as possible in the planning process and will be presented in an integrated setting where possible. To

the extent possible, visitors will be offered a choice in viewing captioned or uncaptioned versions, but in situations where a choice is not possible or feasible, a captioned version of all programs will be made available. Park management will decide on the most appropriate operational approach for the particular site.

Guidelines Affecting Mobility Impaired Visitors

1. The theater, auditorium, or viewing area shall be accessible and free of architectural barriers, or alternative accommodations will be provided. UFAS 4.1.
2. Wheelchair locations will be provided according to ratios outlined in UFAS 4.1.2(18a).
3. Viewing heights and angles will be favorable for those in designated wheelchair locations.
4. In designing video or interactive components, control mechanisms will be placed in an accessible location, usually between 9" and 48" from the ground and no more than 24" deep.

Guidelines Affecting Visually Impaired Visitors

1. Simultaneous audio description will be considered for installations where the equipment can be properly installed and maintained.

Guidelines Affecting Hearing Impaired Visitors

1. All audiovisual programs will be produced with appropriate captions.
2. Copies of scripts will be provided to the parks as a standard procedure.
3. Audio amplification and listening systems will be provided in accordance with UFAS 4.1.2(18b).

Guidelines Affecting Learning Impaired Visitors

1. Unnecessarily complex and confusing concepts will be avoided.
2. Graphic elements will be chosen to communicate without reliance on the verbal component.

3. Narration will be concise and free of unnecessary jargon and technical information.

Exhibits

Numerous factors affect the design of exhibits, reflecting the unique circumstances of the specific space and the nature of the materials to be interpreted. It is clear that thoughtful, sensitive design can go a long way in producing exhibits that can be enjoyed by a broad range of people. Yet, due to the diversity of situations encountered, it is impossible to articulate guidelines that can be applied universally.

In some situations, the exhibit designer has little or no control over the space. Often exhibits are placed in areas ill-suited for that purpose; they may incorporate large or unyielding specimens, may incorporate sensitive artifacts which require special environmental controls, and room decor or architectural features may dictate certain solutions. All in all, exhibit design is an art which defies simple description. However, one central concern is to communicate the message to the largest audience possible. Every reasonable effort will be made to eliminate any factors limiting communication through physical modification or by providing an alternate means of communication.

Guidelines Affecting Mobility Impaired Visitors

1. Exhibit space will be free of physical barriers or a method of alternate accommodation will be provided.
2. All pathways, aisles, and clearances will meet standards set forth in UFAS 4.3. Generally a minimum width of 36" will be provided.
3. Ramps will be as gradual as possible and will not exceed a slope of 1" rise in 12" run, and otherwise conform with UFAS 4.8.
4. Important artifacts, labels, and graphics, will be placed at a comfortable viewing level relative to their size. Important text will be viewable to all visitors. Display cases will allow short or seated people to view the contents and the labels. Video monitors associated with exhibits will be positioned to be comfortably viewed by all visitors.

5. Lighting will be designed to reduce glare or reflections, especially when viewed from a wheelchair.
6. Ground and floor surfaces near the exhibit area will be stable, level, firm, and slip-resistant. (UFAS 4.5).
7. Operating controls or objects to be handled by visitors will be located in an area between 9" and 48" from the ground and no more than 24" deep. (UFAS 4.3)
8. Horizontal exhibits (e.g., terrain model) will be located at a comfortable viewing height.
9. Information desks and sales counters will be designed for use by visitors and employees using wheelchairs, and will include a section with a desk height no greater than 32" to 34", with at least a 30-inch clearance underneath. The width should be a minimum of 32" vertical, with additional space provided for cash registers or other equipment, as applicable.
10. Accessibility information about the specific park should be available at the information desk and the International Symbol of Access will be displayed where access information is disseminated.
11. Railings and barriers will be positioned in such a way as to provide unobstructed viewing by persons in wheelchairs.

Guidelines Affecting Visually Impaired Visitors

1. Exhibit typography will be selected with readability and legibility in mind.
2. Characters and symbols shall contrast with their backgrounds, either light characters on a dark background or dark characters on a light background. (UFAS 4.30.3)
3. Tactile and participatory elements will be included where possible.
4. Audio description will be provided where applicable.

5. Signage will be provided to indicate accessible restrooms, telephones, and elevators. (UFAS 4.30)

Guidelines Affecting Hearing Impaired Visitors

1. Information presented via audio formats will be duplicated in a visual medium, either in the exhibit copy or by printed material.
2. Amplification systems and volume controls will be incorporated to make programs accessible to the hard of hearing.
3. Written text of all audio narrations will be provided.
4. All narrated AV programs will be captioned.
5. Allowance for Telecommunication Devices for the Deaf (TDD) will be included into information desk designs.

Guidelines Affecting Learning Impaired Visitors

1. Exhibits will avoid unnecessarily complex and confusing topics.
2. Graphic elements will be developed to communicate nonverbally.
3. Unfamiliar expressions and technical terms will be avoided and pronunciation aids will be provided where appropriate.
4. To the extent possible, information will be provided in a manner suitable to a diversity of abilities and interests.
5. Where possible, exhibits will be multisensory. Techniques to maximize the number of senses utilized in an exhibit will be encouraged.
6. Exhibit design will be cognizant of directional handicaps and will utilize color and other creative approaches to facilitate comprehension of maps.

Historic Furnishings

Historically refurnished rooms offer the public a unique interpretive experience by placing visitors within historic spaces. Surrounded by historic artifacts visitors can feel the spaces "come alive" and relate more directly to the historic events or personalities commemorated by the park.

Accessibility is problematical in many NPS furnished sites because of the very nature of historic architecture. Buildings were erected with a functional point of view that is many times at odds with our modern views of accessibility.

The approach used to convey the experience of historically furnished spaces will vary from site to site. The goals, however, will remain the same, to give the public as rich an interpretive experience as possible given the nature of the structure.

Guidelines Affecting Mobility Impaired Visitors

1. The exhibit space shall be free of architectural barriers or a method of alternate accommodation shall be provided, such as slide programs, videotaped tours, visual aids, dioramas, etc.
2. All pathways, aisles, and clearances shall (when possible) meet standards set forth in UFAS 4.3 to provide adequate clearance for wheelchair routes.
3. Ramps shall be as gradual as possible and not exceed a 1" rise in 12" run, and conform with UFAS 4.8.
4. Railings and room barriers will be constructed in such a way as to provide unobstructed viewing by persons in wheelchairs.
5. In the planning and design process, furnishing inaccessible areas, such as up floors of historic buildings, will be discouraged unless essential for interpretation.
6. Lighting will be designed to reduce glare or reflections when viewed from a wheelchair.

7. Alternative methods of interpretation, such as audiovisual programs, audio description, photo albums, and personal services will be used in areas which present difficulty for the physically impaired.

Guidelines Affecting Visually Impaired Visitors

1. Exhibit typefaces will be selected for readability and legibility, and conform with good industry practice.
2. Audio description will be used to describe furnished rooms, where appropriate.
3. Windows will be treated with film to provide balanced light levels and minimize glare.
4. Where appropriate, visitor-controlled rheostat-type lighting will be provided to augment general room lighting.
5. Where appropriate and when proper clearance has been approved, surplus artifacts or reproductions will be utilized as "hands-on" tactile interpretive devices.

Guidelines Affecting Hearing Impaired Visitors

1. Information about room interiors will be presented in a visual medium such as exhibit copy, text, pamphlets, etc.
2. Captions will be provided for all AV programs relating to historic furnishings.

Guidelines Affecting the Learning Impaired

1. Where appropriate, hands-on participatory elements geared to the level of visitor capabilities will be used.
2. Living history activities and demonstrations which utilize the physical space as a method of providing multisensory experiences will be encouraged.

Publications

A variety of publications are offered to visitors, ranging from park folders which provide an overview and orientation to a park to more comprehensive handbooks. Each park folder should give a brief description of services available to the disabled, list significant barriers, and note the existence of TDD phone numbers, if available.

In addition, informal site bulletins are often produced to provide more specialized information about a specific site or topic. It is recommended that each park produce an easily updatable "Accessibility Site Bulletin" which could include detailed information about the specific programs, services, and opportunities available for the disabled and to describe barriers which are present in the park. These bulletins should be in reasonably large type, 18 points or larger.

Guidelines Affecting Mobility Impaired Visitors

1. Park folders, site bulletins, and sales literature will be distributed from accessible locations and heights.
2. Park folders and Accessibility Site Bulletins should endeavor to carry information on the accessibility of buildings, trails, and programs by the disabled.

Guidelines Affecting Visually Impaired Visitors

1. Publications will be designed with the largest type size appropriate for the format.
2. Special publications designed for use by the visually impaired should be printed in 18-point type.
3. The information contained in the park folder should also be available on audio cassette. Handbooks, accessibility guides, and other publications should be similarly recorded where possible.

Guidelines Affecting Hearing Impaired Visitors

1. Park site bulletins will note the availability of such special services as sign language interpretation and captioned programs.

Guidelines Affecting Learning Impaired Visitors

1. The park site bulletin should list any special services available to this group.

Wayside Exhibits

Wayside exhibits, which include outdoor interpretive exhibits and signs, orientation shelter exhibits, trailhead exhibits, and bulletin boards, offer special advantages to disabled visitors. The liberal use of photographs, artwork, diagrams, and maps, combined with highly readable type, make wayside exhibits an excellent medium for visitors with hearing and learning impairments. For visitors with sight impairments, waysides offer large type and high legibility.

Although a limited number of NPS wayside exhibits will always be inaccessible to visitors with mobility impairments, the great majority are placed at accessible pullouts, viewpoints, parking areas, and trailheads.

The NPS accessibility guidelines for wayside exhibits help ensure a standard of quality that will be appreciated by all visitors. Nearly everyone benefits from high quality graphics, readable type, comfortable base designs, accessible locations, hard-surfaced exhibit pads, and well-designed exhibit sites.

While waysides are valuable on-site "interpreters," it should be remembered that the park resources themselves are the primary things visitors come to experience. Good waysides focus attention on the features they interpret, and not on themselves. A wayside exhibit is only one of the many interpretive tools which visitors can use to enhance their appreciation of a park.

Guidelines Affecting Mobility Impaired Visitors

1. Wayside exhibits will be installed at accessible locations whenever possible.

2. Wayside exhibits will be installed at heights and angles favorable for viewing by most visitors including those in wheelchairs. For standard NPS low-profile units the recommended height is 34" from the bottom edge of the exhibit panel to the finished grade; for vertical exhibits the height of 24" to 28", depending on panel size.
3. Trailhead exhibits will include an accessibility advisory.
4. Wayside exhibits sites will have level, hard-surfaced exhibit pads.
5. Exhibit sites will offer clear, unrestricted views of park features described in exhibits.

Guidelines Affecting Visually Impaired Visitors

1. Exhibit type will be as legible and readable as possible.
2. Panel colors will be selected to reduce eye strain and glare, and to provide excellent readability under field conditions. White should not be used as a background color.
3. Selected wayside exhibits may incorporate audiostations or tactile elements such as models, texture blocks, and relief maps.
4. For all major features interpreted by graphic wayside exhibits, the park should offer nonvisual interpretation covering the same subject matter. Examples include cassette tape tours, radio messages, and ranger talks.
5. Appropriate tactile cues should be provided to help visually impaired visitors locate exhibits.

Guidelines Affecting Hearing Impaired Visitors

1. Wayside exhibits will communicate visually and will rely heavily on graphics to interpret park resources.
2. Essential information included in audiostation messages will be duplicated in written form, either as part of the exhibit text or with printed material.

Guidelines Affecting Learning Impaired Visitors

1. Topics for wayside exhibits will be specific and of general interest. Unnecessary complexity will be avoided.
2. Whenever possible, easy to understand graphics will be used to convey ideas, rather than text alone.
3. Unfamiliar expressions, technical terms, and jargon will be avoided. Pronunciation aids and definitions will be provided where needed.
4. Text will be concise and free of long paragraphs and wordy language.