

LONG-RANGE INTERPRETIVE PLAN

MAMMOTH CAVE NATIONAL PARK

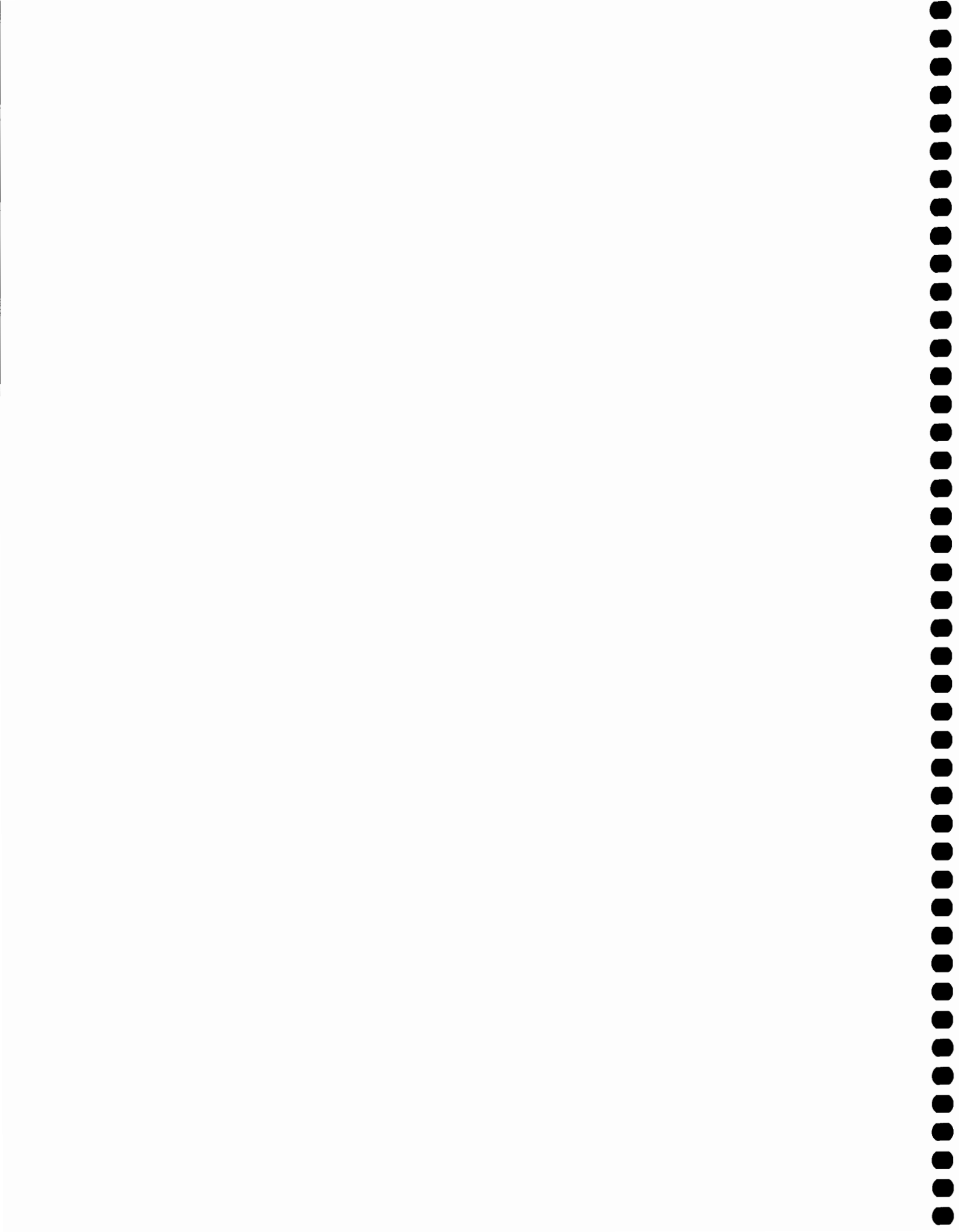


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LONG-RANGE INTERPRETIVE PLAN

MAMMOTH CAVE NATIONAL PARK

2004

Prepared by

**Department of the Interior
National Park Service**

**Mammoth Cave
National Park**

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Mammoth Cave National Park

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INTRODUCTION

This Long-Range Interpretive Plan (LRIP) presents a visitor experience vision for Mammoth Cave National Park based on mission, significance, and management goals identified in the park's Strategic Plan. The LRIP articulates park themes and proposes interpretation activities, services, media, and facilities.

The goal of interpretive planning is development of focused, cost-effective, high-quality activities that effectively address all stakeholder audiences and achieve National Park Service and Mammoth Cave National Park management goals.

The LRIP sets the interpretive direction for the park during the next decade. It lays the foundation for the next phase of a comprehensive interpretive planning process – media planning, design and production, and the organization of staff and activities into annual implementation plans.

The planning process facilitates collaborative creativity among park staff, interpretive partners and media specialists. This team of interpretation specialists evaluates the park's interpretive program and focuses interpretive efforts on Mammoth Cave National Park's significant resources, themes, and issues. The planning process is based on a hierarchical system of goals beginning with the National Park Service Organic Act of 1916, specific area legislation, and a strategic plan. The process then defines the "big picture" vision for the park, its resources, and public use. Goals that direct the planning process are rooted in a clear identification of the mission and significance of the area. Purpose, derived largely from the park's legislation, defines why Mammoth Cave National Park was originally established and what its purpose is today. Significance statements describe the importance or distinctiveness of the area and its resources. Goal-driven planning develops interpretive proposals to enhance opportunities for people to understand, enjoy, and appreciate Mammoth Cave National Park.

Each resource zone identified for Mammoth Cave National Park is unique in many of its natural and cultural resources. At the same time, shared resources, transitions and interdependencies link the areas. This long range interpretive plan attempts to recognize individual resources while emphasizing linkages within the central Kentucky karst region and to global resource preservation perspectives.

BACKGROUND FOR PLANNING



Background for Planning

PARK MISSION AND SIGNIFICANCE

Beneath the sandstone-capped ridges of Mammoth Cave National Park lies the most extensive known cave system on Earth, with over 300 miles of passageways mapped and surveyed. And yet after 4,000 years of intermittent exploration, the full extent of this water-formed labyrinth remains a mystery.

PURPOSE

As stated in the park's Strategic Plan, the purpose for the establishment of Mammoth Cave National Park is to:

Protect and preserve for the future the extensive limestone caverns and associated karst topography, scenic riverways, original forests, and other biological resources, evidence of past and contemporary lifeways;

Provide for public education and enrichment through scientific study;

Provide for development and sustainable use of recreation resources and opportunities.

RESOURCE SIGNIFICANCE

The following statements summarize the significance of park resources and capture the essence of this park's importance to our natural and cultural heritage.

Mammoth Cave National Park, designated as a World Heritage Site and an International Biosphere Reserve, is internationally renowned because:

The many types of karst geologic features are the product of a unique set of conditions found nowhere else.

It contains a portion of the longest known cave system in the world.

The park and the surrounding area supports the most diverse cave biota in the world, with more than 130 species of fauna, of which 14 species are found nowhere else.

The saltpeter works in Mammoth Cave are the best example of a technology that was important in the early history of the United States.

Mammoth Cave National Park is the core of one of the best-understood karst areas in the world.

Mammoth Cave National Park contains an unusual variety of ecological niches that provide habitat for an abundance of plants and animals, including 11 endangered species.

Mammoth Cave contains a rich diversity of flora reflected in a variety of habitats including remnant prairie, upland wetlands, riparian, and old growth communities.

Mammoth Cave contains a quantity of primary cultural resources, which have been valuable in the understanding of human interaction with the natural environment prehistorically from the paleo-Indians to the Mississippian period, and historically from early settlement (1774-1825) to the depression era (1929-1941).

The park provides an abundance of recreation opportunities, surface and subsurface.

THEMES

Interpretive themes describe the most important ideas, concepts, or messages about Mammoth Cave National Park. They provide guidelines for selecting interpretive stories and planning facilities and activities to tell those stories. All interpretation should relate to one or more of the themes; each theme should be addressed by some part of the interpretive program.

Park staff will link the following interpretive themes to the National Park Service's thematic frameworks "Natural History in the National Park System" and "History and Prehistory in the National Park System" to develop compelling stories for presentation to visitors. Interactions among visitors, neighbors, staff, and interpretation media can share many stories that enhance understanding of the themes.

PRIMARY THEME

The Mammoth Cave landscape shelters an underground labyrinth unmatched in size and complexity; the mysteries of this diverse natural laboratory have inspired and sustained human discovery for thousands of years.

THEMES

Discovery / Exploration

We share with our ancestors a burning curiosity that guides us to adventure, excitement, and discovery of the unknown.

Science / Research

Knowledge from ongoing scientific research and investigation in the Mammoth Cave biogeographic area helps to alleviate external and internal threats to the park's natural and cultural resources, expands understanding of complex ecological systems, and enhances visitor experience.

Cultural History

For more than 10,000 years people have interacted with the Mammoth Cave landscape using natural resources to ensure their survival and improve their quality of life.

Karst Landscape / Geology

The definitive example of karst landscape and geology of south central Kentucky contains the longest cave in the world, Mammoth Cave.

Diverse Biology

The diverse flora and fauna of Mammoth Cave National Park, some of international significance and endangered, is faced with external and internal challenges that affect visitor use and management of the park.

MANAGEMENT GOALS

Through interpretive and educational programs, the National Park Service will instill in park visitors an understanding, appreciation, and enjoyment of the significance of parks and their resources. Interpretive and educational programs will encourage the development of a personal stewardship ethic, and broaden public support for preserving park resources.

NPS Management Policies

Management goals are conceptual descriptions of desired future conditions for park resources, visitor experience, partnership opportunities, and organizational effectiveness.

Mammoth Cave National Park goals for interpretation and education describe opportunities the park will provide for stakeholders to enjoy,

appreciate, learn, and benefit from their experiences with national park resources and programs.

PRESERVE PARK RESOURCES

The natural and cultural resources of Mammoth Cave National Park are managed as defined by legislation within the context of World Heritage Site and International Biosphere Reserve designations.

Mammoth Cave National Park serves as the core of a broad scientific and academic research effort that is applied directly to management decisions and contributes to the general knowledge of social and natural processes of karst ecosystems.

PROVIDE FOR THE PUBLIC ENJOYMENT AND VISITOR EXPERIENCE OF PARKS

Visitors safely enjoy and are satisfied with the availability, accessibility, diversity, and quality of park facilities, services, and appropriate recreational opportunities.

Through interpretative activities, education programs, and publications the value of Mammoth Cave National Park cultural and natural resources will be conveyed to park constituents in the context of World Heritage and Biosphere Reserve status.

STRENGTHEN AND PRESERVE NATURAL AND CULTURAL RESOURCES AND ENHANCE RECREATIONAL OPPORTUNITIES MANAGED BY PARTNERS

Heritage resources within the Mammoth Cave National Park sphere of influence are conserved through partnerships that increase support for and understanding of their significance.

Mammoth Cave National Park will strive to strengthen the relationship between the park and its stakeholders through promotion of and involvement in formally sponsored external and on-site programs.

Recreation opportunities in the region will be enhanced through the promotion of Heritage Tourism in cooperation with state and local officials and individuals and organizations.

ENSURE ORGANIZATIONAL EFFECTIVENESS

Mammoth Cave National Park will become more productive utilizing the best available technology, management systems, and practices.

Mammoth Cave National Park will increase its capabilities through initiatives and support from other agencies, organizations, and individuals.

As a Center for Environmental Innovation, Mammoth Cave National Park will actively pursue the use of green technologies and where feasible convey the value of such practices to the visiting public and park neighbors.

VISITATION AND VISITOR USE DATA

VISITATION STATISTICS

Annual Recreation Visits

	TOTAL PARK RECREATIONAL VISITS	TOTAL CAVE TOUR PARTICIPANTS
1992	1,928,891	566,185
1993	2,396,234	531,769
1994	2,009,935	526,247
1995	1,935,709	517,129
1996	1,896,829	480,177
1997	1,997,658	467,239
1998	2,113,992	452,607
1999	1,710,983	439,595
2000	1,749,268	419,307
2001	1,883,580	407,288
2002	1,891,307	402,022
2003	1,961,388	379,645

Monthly Recreation Visits

	2003 PARK RECREATIONAL VISITS	2003 CAVE TOUR PARTICIPANTS
JANUARY	82,516	4,874
FEBRUARY	72,841	4,995
MARCH	116,210	24,611
APRIL	159,171	40,806
MAY	188,355	31,447
JUNE	217,213	53,960
JULY	288,435	84,135
AUGUST	261,275	62,933
SEPTEMBER	157,770	18,864
OCTOBER	127,128	30,449
NOVEMBER	103,854	15,097
DECEMBER	94,389	7,474

Season Recreation Visitation Patterns - 2003

Fall	(Sep-Nov)	16.9%
Winter	(Dec-Feb)	4.9%
Spring	(Mar-May)	25.5%
Summer	(Jun-Aug)	53.0%

VISITOR PROFILE SUMMARY

Approximately 380,000 people went on cave tours in 2002. The primary attraction for Mammoth Cave visitors is the cave, but other mostly unrecognized attractions are available. Surface activities include driving for pleasure, hiking, horseback riding, picnicking, camping, photography, boating, nature/wildlife observation, and concession facilities such as food services and souvenir sales.

Visitor Studies

A survey conducted at the park provides the following demographic information about visitors.

Almost 40% of visitors surveyed were from the states of Kentucky and Ohio; 8% were from the south central Kentucky karst region.

Almost half (47%) of visitors stay in the area for two or three days; 40% stay one day; 13% stay more than three days.

Almost equal numbers (51%) were on their first visit or had previous experiences at the park (48%), some as many as three times.

Mammoth Cave National Park was the primary destination for 57% of visitors; 42% visited en route to other destinations.

The four most popular cave experiences are the Historic, Travertine, Grand Avenue, and Frozen Niagara tours.

Almost half of visitors remained in the visitor center area while waiting for tour departure. Of these, 50% waited 30 minutes or less; 34% waited from 30 minutes up to 1-1/2 hours.

Over half (56%) of the groups interviewed included at least one person with a college or advanced degree.

Visitation includes a substantial number of children, age 17 or under.

Trends

Most visitors travel to the park during the months of May, June, July (peak month), August, September, and October.

The fall season is characterized by high weekend visitation through mid-November. Spring is a very significant visitor season with Easter and spring break experiencing summer-like crowds.

Recent changes in school calendars impact visitor trend and education

Background for Planning

programming. The spring field trip season has compressed as spring breaks have lengthened and testing periods have increased. Fall field trip seasons have been expanding as schools start in early August and are therefore ready to take classes on off-school trips earlier in the fall.

STAKEHOLDER / AUDIENCE NEEDS AND EXPECTATIONS

The following description of current and potential audiences is based on park staff observation of visitors and review of comments. This information supplements the limited data from visitor surveys. Both sources of information will guide development of interpretation and education actions presented in the **FUTURE INTERPRETIVE PROGRAM DESCRIPTION** section of this long range interpretive plan.

Stakeholders who visited Mammoth Cave previously have different needs than first-time visitors. They may sometimes want to repeat experiences to share with children and grandchildren, but they often want new cave tours and surface walks. These repeat visitors may be included in all of the following stakeholder categories.

Education Groups

These stakeholders include students participating in curriculum-based education programs and other visitors enjoying informal education activities. They need information and interpretation presented at many levels from elementary to graduate and using varied media from simple graphics to professional exhibits and audiovisuals.

INFORMAL

Students and teachers participating in field trips want to have a fun-filled experience in the cave and on the surface. They expect to go into the cave even if they do not have an advance reservation. Teachers need their students to experience something of value even if the experience does not integrate classroom curriculum.

Elderhostel visitors want all experiences available to field trip participants. In addition they expect in-depth exposure to resources.

Stakeholders seeking interaction with the park as Internet visitors expect web pages to provide a condensed window to the park.

FORMAL (CURRICULUM-BASED)

A curriculum-based education program currently serves school systems in the karst region. Participants in program activities need access to transportation to and from the park, availability of substitute teachers, an adequate supply of educational materials, and knowledge about grants or other sources of funding. They need a program that is appropriate for various age groups and useful in meeting school district criteria. Teachers have a specific educational outcome in mind and expect the park experience to support classroom learning. Park staff expects teachers to prepare their classes for on-site learning before arrival at the park. Efforts to fulfill both expectations will rely heavily on teacher workshops. Teacher participation in workshops and seminars will create a sense of ownership in the park program. It will also extend the effectiveness of park staff by providing a continuum of learning for students before, during, and after the park visit. Teachers want the curriculum-based program to focus on hands-on fieldwork that provides an enjoyable experience. The park and local school districts will benefit from an increase in the level and sophistication of activities offered. Both entities need museum exhibits that meet educational needs. They need a designated time and extra staff to take school groups into the cave during peak school visitation, usually between nine o'clock in the morning and one o'clock in the afternoon.

Participants in the Mammoth Cave International Center for Science and Learning program at the park will want activities that link current research findings and educational activities and that are designed for various educational levels. As the research and education coordinators of the Center attract additional educational audiences, new expectations and needs will emerge.

Workshop participants expect extended programs that provide in-depth learning opportunities. They need adequate facilities and materials to accommodate specific workshop activities.

Visitor Center

The visitor center is expected to serve two very different audiences - one short-term (probably 5-20 minutes) and the other long-term (up to two hours). Visitor center exhibits, audiovisuals, and personal services must have layers of information that allow these two types of visitor center users to understand the main message presented in the center.

Background for Planning

SHORT-TERM AUDIENCES

The short-term audience includes visitors who choose to spend time in the visitor center while waiting for tickets or tour departure. This multi-tasking audience will listen or look for tour information, meet personal need such as restrooms, and seek knowledge about upcoming tour experiences in exhibit area and bookstore. Exhibits must quickly convey a main message that is understandable following a short visit. In addition, the exhibits can pique interest and therefore encourage this audience to return when they have time to focus more attention on the exhibits. Encouragement for short-term audiences to visit the exhibits will be provided by unobtrusive but clearly presented elements in the exhibit area to assure visitors they will not miss cave tours.

LONG-TERM AUDIENCES

This audience includes visitors without time constraints. Perhaps they have chosen not to go on a tour and are waiting for family members to return from their tour. Maybe they arrived late in the day after the last tour departure. Some long-term visitors plan to stay several days in the park. Some may simply choose the exhibits as a supplemental experience. The exhibits need to have the depth of information and options that allow and encourage these visitors to spend time in the exhibit area. This audience will expect interactivity, audiovisuals, and seating intended specifically for exhibit enjoyment.

Surface Recreation

Horseback riders want secure parking to accommodate trailers and tow vehicles. They need well-maintained trails and adequate signs indicating locations and describing appropriate trail etiquette.

Backpackers want secure parking at trailheads and a backcountry camping site available on demand and in a location that contributes to a sense of privacy. They need fire rings designating safe campfire locations and adequate signs indicating locations and describing appropriate trail etiquette and minimum impact camping techniques.

Day hikers/walkers want easy access to parking at a well marked trailhead. They want a quiet experience away from the activity of roads and developed areas. They expect level trails with a solid surface that provides a safe activity. They need orientation information at trailheads that contributes to education, enjoyment, and safety.

Stakeholders participating in fishing activities want easy access to rivers and lakes, camping close to the water, and opportunity to find a location that provides a quiet environment.

Boaters expect parking to accommodate trailers and tow vehicles and launch site that provides safe access to the water for power and paddle boats.

Cyclists need designated bike trails that separate bikers from other recreational users. Street bikers want hard surfaced trails that prevent damage to vehicles and contribute to rider safety.

Picnickers need grills, trash cans, restrooms, and water. Group picnickers also like shelters and evening/night availability of facilities to accommodate large gatherings.

People participating in camping at developed campgrounds need a campsite appropriate to their mode of camping (tent, trailer, and motor home). Campers need a fire pit, restrooms, and source of firewood. All campers want 24 hr access to hot showers. Recreational vehicle users want electric hook up and convenient sources of water. Most campers want a separate tent camping area and availability of evening campfire programs in or near the campground.

Driving enthusiasts expect scenic roadways with overlooks. They prefer a loop route with informal interpretation. A well-designed entrance sign offering photo opportunities adds to their experience.

Cave Tours

Cave tour participants expect formations. One challenge for park staff is to dispel the idea that all caves abound in stalactites and stalagmites. They also expect the park to offer a single tour that is readily available to individuals and small groups and that exposes them to the complete story of Mammoth Cave. They expect to be cold while in the cave, but they want enjoyment and usually a lights-out experience. These visitors need a safe experience while traveling to and walking through the cave. They need a basic tour experience that is easy for most first time visitors and does not require a lot of decision-making to select the tour. Mobility impaired visitors need and expect access to the cave.

Tour Planners

This category of stakeholder expects accurate information, opportunity to talk to a courteous National Park Service employee, timely responses to inquiries, and recommendations about appropriate

Background for Planning

experience opportunities for their group. A growing number of these stakeholders expect detailed information on the Internet.

Motor coach tour planners have a higher than normal expectation of accommodation. Their expectations of time and flexibility of tour departure and length may be different than the requirements of park staff schedulers. They need long-term consistency of price and schedules, and need to make bookings as much as 18-24 months in advance without having to make payment prior to activity.

Heritage Connection

Archival researchers expect ready access to archives, availability of a subject matter expert to assist their research, and opportunity to make copies of unrestricted documents.

Stakeholders wanting to visit specific heritage sites expect free access to the site and personal service if required for access. They expect cemeteries to be maintained.

Visitors participating in special incidental use activities expect access to facilities or sites of their choice.

Special Events

Participants at special events expect a high quality, well-organized and controlled experience that has personal value. They expect a continuity of experiences that builds upon previous events.

Special Access Needs

All people of this category need programs, activities and environments with which they can engage. Park activities must provide information about rules and regulations, orientation to the park, and identification of activity locations in a format usable by the targeted audience. The park staff needs to anticipate a lot of preparation time and plan to provide more attention to special interest stakeholders at the park.

CHRONOLOGY OF EVENTS IMPACTING INTERPRETATION AND EDUCATION

This long-range interpretive planning effort lies at the terminus of 188 years of cave tour guiding tradition and experience. In order to effectively recommend actions for the future, a review of the recent past is helpful. An interpretive chronology of the past thirty years has been compiled and included in the Database (section III) of the Park's Comprehensive Interpretive Plan and was used as a reference in the development of this plan and its review.

INTERPRETATION AND EDUCATION OBJECTIVES

Objectives describe physical, intellectual and emotional experiences that will be available to people interested in Mammoth Cave National Park. Long-range interpretive plan proposals will facilitate the following objectives to assist managers in fulfilling park management goals.

Make scientific knowledge easily available to all stakeholders (including staff) in a useable format that excites and challenges a highly educated audience.

Provide both surface and sub-surface interpretation and education opportunities that create experiential links among all aspects of this complex ecosystem.

A variety of experience opportunities let visitors choose from several alternatives that meet their current experiential and educational level. Layers of involvement will be designed so that different interests and time frames can be accommodated and each additional activity will build on previous ones to create a rich experience. Develop a minimum core experience appropriate for all visitors.

Visitors understand the interrelationships of Mammoth Cave's resources with the hydrogeological karst ecosystem and landscape that contributed to designation as an International Biosphere Reserve and World Heritage Site.

Appropriately balanced and integrated cultural and natural history themes contribute to people understanding the interrelationships between natural processes and human activities.

Distinctive visitor orientation and interpretation opportunities convey a sense that the "Mammoth Cave experience" is available nowhere else.

Park staff adapts to changing visitation trends by creating innovative interpretation activities to engage visitors and residents in experiences that reflect the complexity of area's resources.

Park programs provide information and activities necessary for visitors to safely participate in all recreational opportunities within the park.

Park visitor and neighbor understanding and appreciation of the national and international significance of park resources foster a sense of individual responsibility for wise stewardship of the environment in general and groundwater resources in particular.

Interpretation and education activities demonstrate the park's place within the National Park System, and the World Heritage Site and the Man and the Biosphere programs.

The park's interpretive offering will strive to provide an in-cave experience for as many visitors as possible without impacting resources or compromising minimum interpretive standards.

EXISTING CONDITIONS AND ISSUES

STAFFING

Staff positions assigned to Interpretation and Education have declined significantly in recent years. The Mammoth Cave National Park Business Plan was completed in 2003 and cites a 10.5 FTE shortfall for basic visitor service operations at an estimated cost of \$694,000.

The interpretive program is supported largely by seasonal staff in the peak summer months. Funds to hire permanent staff would provide the capacity to support interpretive programming year round and decrease recruitment and training costs associated with high volumes of seasonal staff.

Funds are also needed to increase educational programs, to promote park-based science, and to develop a cave conservation education program. Benefits of an expanded education program include: new and existing research partnerships leveraged for training, research, and technical assistance; the expansion of the existing education programs to include secondary and adult education within the Mammoth Cave Area Biosphere Reserve; and the adoption of best management practices by an additional 50% of local landowners.

COMPLICATED EXPERIENCE OPPORTUNITIES

Visitors often arrive at the park inadequately prepared to make appropriate choices. A large menu of cave tour options creates confusion for most visitors. Most visitors arrive at the park expecting a choice of one or two short tours. Instead they encounter a complex offering of tours varying from one hour and a fraction of a mile to several hours and several miles in length each going to a different part of the cave.

LACK OF VISITOR CENTER EXHIBITS

Due to crowding in the early 1970's exhibits were removed and exhibit space converted to an expanded fee collection facility. A 1991 attempt to return exhibits to the ticket sales lobby was largely unsuccessful. Poorly designed exhibits have not been sustainable and are largely ignored by visitors preoccupied with obtaining tickets for conducted

tours. A separate exhibit space is needed so visitors can focus on primary themes presented to support but not duplicate messages of conducted tours. A visitor center renovation plan has been completed. Funding for exhibit planning could be available, but the overall funding required for full production will not be available for several years.

VISITATION TRENDS

Visitation has seen both rapid increase and slow decline in the past 62 years. A rapid increase was experienced following World War II. From 1955 until 1973, the park underwent a steady annual increase in cave visitation. Between 1974 and 1983, visitation declined 40% reaching a low of 402,385. Cave visitation increased steadily between 1984 and 1992, peaking at 563,811. The last eleven years have seen another steady period of decline as 2003 reached a 40 year low of 379,708, a 33% decrease in visitation.

The 2003 Cave Tour Operations Business Plan identifies a number of factors leading to the most recent period of decline:

Significant changes in tourism travel patterns. The tourism industry recognizes that travelers are trending toward long weekend trips rather than traditional 1-2 week long vacations, resulting in greater limitations on travel time and travel distance.

Changes in school schedules. As school calendars have shifted to a near year round schedule, park staff has seen longer Spring, Fall, and Christmas breaks and shorter Summer breaks, again strengthening the shorter mini vacation trend.

Most Cave Tours require 2+ hours. Review of cave tour trends among the members of the National Caves Association reveals that there is an overall trend toward shorter tours. With the vast majority of cave tours at Mammoth Cave taking at least two hours, visitors may be less inclined to make the time commitment during an ever-shrinking vacation time.

Ticket Prices. Ticket prices have doubled over the past eight years. It is unclear as to the overall impact of price in visitor tour decisions. While some feel the price is a minor factor, others feel that the combined price for families is significant and might well be impacting the number of tours that visitors choose to participate in.

Background for Planning

Visitor Perceptions and Barriers. The team involved in the cave tour analysis felt that a number of perceptions and real barriers exist that visitors must overcome before making the final decision to participate in a cave tour:

- Complexity of information that needs to be gathered, i.e. time required, distance, physical demands, price, tour availability, etc.
- Aging population with some concern as to lighting level, footing, and physical demand of cave tour.
- Perception that a National Park experience is physically demanding.
- Aging infrastructure and “retro” facilities that date back to the 1960s and 1970s.
- Lack of museum amenities and interactive learning components.

It should be noted that the 21% decline in visitation at Mammoth Cave National Park is parallel to other units of the National Park system with primary cave resources. Carlsbad Caverns has seen a 19% decline, Wind Cave a 12.5% decline, Jewel Cave a 15% decline, and Oregon Caves a 21% decline.

EDUCATION PROGRAM COMPATIBILITY

Park sponsored education programs need to continue presenting activities that match criteria established by Kentucky curricula. Changes in state teacher requirements demand that park staff remains knowledgeable of current education criteria. The park program must continually update to remain viable as a resource for curriculum-based learning opportunities for schools within the Barren River Development District. The park program must also adjust to school schedules that now demand year round activities. Seasonality of staffing creates difficulty in maintaining staff at appropriate levels to respond to school needs.

VISITOR STUDIES

The last visitor use study at the park was conducted ten years ago and needs to be updated to reflect current visitor use trends. Basic visitor profile information sources include a few studies, park staff observation of general visitor behavior, and review of visitor comments and suggestions. Inadequate demographic and personal information about visitors limit the capability of managers to accurately assess the desires of present visitors and to design interpretation and education

activities with assurance that they meet visitor and park management needs.

ECOSYSTEM MANAGEMENT

Protecting park resources involves action and development within the park and beyond the park boundary. Increased vigilance is needed to ensure that activities of park neighbors, staff, concessionaires, and visitors do not adversely affect park resources on the surface and in caves. The park has initiated a number of projects in cooperation with local, state, and federal agencies to change some of the long held but detrimental land use practices in the area. Residents and visitors need to be made aware of these efforts and encouraged to support similar efforts for the protection of water and air resources everywhere. Visitors and park neighbors need to be informed about the threat and consequences of ground water and air contamination in the park and throughout the south central Kentucky karst region.

ACCESSIBILITY

Physical access to resources for all visitors is a significant issue at Mammoth Cave. Due to failure of the park's cave elevator system and documented elevator code violations there are no handicapped accessible portions of the cave. Visitors need the highest level of access to resources to the greatest extent reasonable without damage to resources. Some areas in the park, especially the cave, are not accessible because of terrain, distance, or size. Most of the cave is a restricted reserve not available to the public in any way.

SURFACE RESOURCE INTERPRETATION

Visitor demands have traditionally focused interpretation on cave resources at Mammoth Cave, and those resources appropriate for surface activities have been under utilized by the public. The result has been to apply precious human resources to the unmet demand for cave tours. Other methods of connecting visitors to the surface resource need to be explored.

INFORMATION

The 2003 national survey on visitor perceptions to NPS fees showed that a lack of information is the biggest barrier or reason that visitors do not visit a national park. To date, the park has not had an aggressive outreach program to market the park and increase the park's profile. The 2003 Business Plan recommends the development of a park marketing strategy to reach visitors.

INTERPRETIVE SKILLS AND PROFESSIONAL COMPETENCIES

Mammoth Cave's reliance on the GS-090 Guide series for both permanent and seasonal staff has resulted in less participation in the national Interpretive Development Program. Guides are encouraged to participate and are awarded for being certified in interpretive competencies, but it is voluntary and therefore not a standard for the work force. Efforts for certification have been limited to date.

LIBRARY RESOURCES

The library space available to seasonal and permanent staff is completely inadequate. One room, ten feet square, is the only dedicated library/study space available to a summer seasonal staff of 55. Library management is a collateral duty for permanent guides, but none have library science experience and have limited time to devote to effective management and growth of the library. Supervisor office space has been sacrificed for vertical file and slide file storage, creating conflicts as staff try to access resources within dedicated office spaces. Efforts are underway to digitalize all vertical files for access by remote computer workstations, but progress is slow without dedicated library personnel.

LONG-TERM ECOLOGICAL MONITORING PROGRAM

Mammoth Cave National Park is the prototype park for cave and karst resource monitoring. Already viewed as the most heavily researched cave in the world, Mammoth Cave's leadership in the LTEM program will make it a model for NPS cave resource research. Opportunity exists for this cutting edge research to infuse the latest scientific information into the park interpretive and education programs.

ENVIRONMENTAL LEADERSHIP

Mammoth Cave National Park has been designated as a Center for Environmental Innovation. This designation along with many park environmental initiatives can be highlighted by the interpretive and education programs to convey innovative examples of wise use that can be used by visitors to develop a more environmentally sustainable society.

PARTNERSHIPS

The Division of Interpretation and Education has developed a number of partnerships to enhance the park's mission. Western Kentucky University's Kentucky Building has shared resources to make Mammoth Cave related material more accessible on-line. The Western Kentucky Public Television station (WKYU-TV) has contributed resources for park films, education videos, and public service announcements. Interpretation and Education has taken a lead role in the establishment and growth of the Kentucky Cave Association. Seven memorandum of understanding have been signed by local school districts to integrate the Mammoth Cave Environmental Education program curriculum guides into classroom activities and on-site learning experiences.

MESSAGING PROJECT

Like many national parks, Mammoth Cave National Park is not recognized by all visitors as a unit of the National Park Service. While all entrance signs contain the NPS arrowhead, they do not conform to the exact standards of the Identity Project. All publications, bulletin board materials, and graphics do however. Continued effort is needed to ensure that all visitors understand that they have entered a nationally significant property.

Background for Planning

FUTURE PROGRAM DESCRIPTION



PRE-ARRIVAL / ADVANCE INFORMATION

Potential visitors and other people interested in Mammoth Cave National Park receive accurate, unbiased information while at home and traveling to the park. They can plan their park experience with information from a variety of media – telephone, publications distributed by mail, up to date website, visitor service facilities, local radio and television broadcasts, and publications purchased from the park cooperating association. Personal services and non-personal media will describe what visitors can expect during their visit, including limitations, restrictions and opportunities, and how they can prepare for safe, enjoyable experiences.

Park staff will develop a marketing strategy to help current and potential audiences understand experience opportunities available at the park, resulting in increased visitation and a higher level of public support. All employees have a significant role in helping local and national audiences understand park activities and values. Staff activities can reach the total population; manager interactions with community leaders can treat the same topics on a different level.

A marketing plan developed by an interdisciplinary park planning team and a contractor or consultant will analyze potential marketing techniques. The plan will recommend a marketing program appropriate for Mammoth Cave National Park. Marketing through regional newspapers, radio, and personal visits will encourage local constituents to participate in national park programs. A variety of activities can target specific audiences. Topical activities including air quality, wildlife, and management decisions will help park staff and local residents respond to threats inside and outside the park. These presentations will help neighbors understand decisions and actions of park managers and staff. Media distributed through American Automobile Association, sport shops, bus tour operators, and recreational organizations will reach national and international audiences.

ADVANCE INFORMATION

Resource Description

The park's information, interpretation, and education programs currently provide limited distance learning opportunities for local, national, and international audiences. Additional pre-arrival information will help potential visitors learn about tours and other experience opportunities. Technological communication techniques, primarily Internet and e-mail, supplement limited personal contact between park staff and distant audiences. Research comparing distance learning to traditional methods of education shows that distance education can be effective if proper communication technologies are combined with opportunities for interaction and feedback. Stakeholders sensitive to rapid technological changes have expectations for high applicability of available technologies. Park staff has responsibility to fulfill that expectation by taking advantage of current technology that increases opportunity to provide services to all stakeholders. The more remote environmental education offices will not have access to the park network for the foreseeable future and are therefore significantly handicapped in utilizing the full potential of the park's Information Technology resources.

Visitor Experience Statement

Distance learning activities will provide worldwide audiences from many social, economic, cultural and experiential backgrounds with opportunities to learn about and support Mammoth Cave National Park and other national park units. Effective distance learning strategies provide knowledge of Mammoth Cave to stakeholders who lack time, money, or ability to travel to the park for onsite experiences. Potential visitors receive accurate, unbiased information through a variety of media (mail, up to date website, reservation system, publications purchased through web from the park cooperating association) to plan their park visit. In route to the park they find information needed to easily navigate to the park with minimal apprehension.

Recommendations

The park will employ a range of technological options selected to assure appropriate outcomes while serving specific audiences or delivering specific messages.

Future Program Description

VOICE

Park operated telephone communication will provide pre-recorded messages and interaction between park staff and distant stakeholders. Recorded messages presented through radio will provide one-way communication and offer telephone follow-up from individual audience participants to park staff. Interactive audio or video conferencing between distance learners and the park education staff may provide the next best thing to off site presentations. Park staff, guest lecturers, and researchers might provide the park component of audio or video conferencing.

AUDIOVISUALS

Audio tapes, still slides and photographs, films, videos, compact disks and digital video disks can provide information about the park to distant audiences. Park staff can choose commercially available products for sale through the cooperating association. Desirable items not available from commercial sources can be produced by staff and offered through a loan program.

DISTANCE LEARNING PROGRAM PLAN

A park planning team will develop an effective, economically feasible distance learning program plan comparable to the park's wayside exhibit, publication, and education plans currently in place. The plan will identify appropriate messages and information to be delivered, audiences to receive distance learning materials, and the range of technological options that meet the needs of audiences appropriate to Mammoth Cave National Park programs and budget.

PUBLICATIONS

An extensive publications program will provide effective information to people without technology capability to participate in other delivery methods. Printed materials will be available for sale from the park cooperating association and for free distribution from park staff by mail. The park will maintain an adequate supply of printed materials to respond to mail requests including new materials developed at an educational level appropriate for children. The marketing plan proposed elsewhere in this document will consider several publications to distribute information to national and international audiences.

COMPUTERS

A recent major overhaul of the park Internet web pages make use of the site more intuitive and incorporate topical brochures in Portable Document Format (PDF). Interpretive staff and the park's web coordinator will maintain and enhance the site to meet the growing demand for electronic information. Frequent updates will provide accurate, current, easily accessible, and compelling content.

The web site will also include an expanded virtual visitor center that delivers evocative interpretation for people who cannot visit the area. Electronic versions of site bulletins will provide detailed information about specific topics. Junior Ranger and education programs adapted for Internet delivery can link to the National Park Service Junior Ranger web site. The park web site will include education activities reflecting national educational standards and relevancy to audiences throughout the United States.

LOCAL COMMUNITIES

Resource Description

Mammoth Cave National Park strives to strengthen relationships between the park and its stakeholders through promotion of and involvement in formal and informal external programs. Management, resource protection, interpretation, and education activities have developed extensive interaction with communities near the national park.

Karst resources managed in context of World Heritage Site and International Biosphere Reserve designations extend National Park Service concern beyond park boundaries. Mammoth Cave National Park's 53,000 acres is the protected area of the Mammoth Cave Area Biosphere Reserve. The transition zone (zone of cooperation) of the reserve includes the groundwater recharge area that surrounds the park. This position and responsibility places the national park at the core of scientific and academic research efforts that affect all stakeholders in the central Kentucky karst area. Park and community partnerships conserve resources, increase understanding of resource significance, and develop stewardship of regional resources.

National park staff promotes heritage tourism through cooperation with state and local officials, individuals, and organizations.

Future Program Description

Mammoth Cave National Park is partnering with a gateway community, the commonwealth Kentucky, and a private developer to establish the Cavelands Heritage Center. This center will provide the traveling public with basic services, promote visitation to the region, celebrate the heritage and folkways of South Central Kentucky, and provide opportunities for accommodation and food service.

Mammoth Cave National Park is committed to provide a uniformed staff presence in the center. Exhibits provided to commemorate the heritage of south central Kentucky will be planned to compliment the exhibits envisioned for the national park visitor center. Kentucky plans to close state welcome centers except those at state boundaries and one in Hart County. These closures and the probable increase in visitation at the Cavelands Heritage Center makes the center a critical location for dissemination of visitor information to potential national park visitors.

Visitor Experience Statement

Park visitors and neighbors will have convenient access to adequate, accurate information and interpretation of park resources, activities and programs through a variety of media appropriate to south central Kentucky audiences. Descriptions of the park will create images of an intriguing local resource dominated by wildlife, geology and history. These images will illustrate park resources that provide communities near the park many opportunities for recreational and educational experiences. Information will describe activities appropriate for various age groups and give directions, fees, and schedules for routine and special events. Local residents will learn about a variety of activities appropriate for repeat visits. Information will clearly identify the park as a unit of the National Park System with national and international significance. Maps and information will introduce all primary themes and some selected topics, suggest sources of detailed information, and provide information about experience opportunities.

Presentations will be factually correct and appropriate for the current interest level of intended audiences. Each presentation will offer opportunities for members of the audience to build on their interest in the park and increase their understanding of Mammoth Cave National Park and the National Park Service.

Recommendations

Services provided by the National Park Service in communities near Mammoth Cave will focus on encouraging local audiences to become park users and supporters. Personal services and other media will describe visitor experience opportunities and present information about activities that introduce people to park resources and programs. Community outreach will include participation in Caveland Marketing Association and County Tourism Commissions activities and the 31W Heritage Corridor development. A staffed contact station at the proposed Cavelands Heritage Center operated by park and partner staff will introduce all national park themes. A National Park Service presence in the Heritage Center will provide visitors opportunity to obtain information, make decisions, and confirm activity reservations without traveling to the park visitor center. It will provide awareness of resources, issues, and visitor experience opportunities within and surrounding the national park. Interpretive managers will remain actively engaged with the planning and development of the center to ensure that service areas, book sales, and media reflect the park's management objective for the center partnership.

Activities designed for short term visitors will be marketed in communities near the park. Marketing messages in local newspapers and radio broadcasts and delivered by personal visits to service providers will reach most segments of local populations. These messages will give local constituents and travelers passing through the region incentive to participate in park produced programs and resource-based experience opportunities.

The park marketing plan will include topical activities (air quality, wildlife in park, management decisions, and threats outside park) of interest to local audiences. Activities help park neighbors understand actions and decisions of park managers and staff and invite community resident participation in park activities to understand park resources, programs, and values. Program activities will dispel community misconceptions related to the park. Components of the marketing plan will provide assistance to visitor service providers outside the park. Park and non-park visitor programs will reflect cooperative

Future Program Description

ventures that provide audiences a complete karst region experience without unnecessary duplication of services or creation of a sense of competition.

PERSONAL SERVICES

The Division of Interpretation and Education and Division of External Programs and Communications will develop, coordinate and present personal services to nearby communities. Activities will encourage stakeholder participation and support of park programs.

Interpretation managers will plan, develop, coordinate, and present a series of show-me days and special events. Presented cooperatively by National Park Service staff, park concessionaires, other visitor service providers in the region and nearby communities, these interpretive events will connect the national park and local stakeholders.

Managers will encourage all park staff to participate with organizations that foster communication, recognition, and acceptance of the park and its programs.

NON-PERSONAL SERVICES

Publication media will include articles for local newsletters, event schedules for activity sections of phone books, a single panel rack card for distribution at museums, parks, and other visitor sites, and distribution of park information to community interest organizations. A newspaper column drafted by park staff and "syndicated" to regional papers will reach many homes in Kentucky's karst region. Printed information provided to the Kentucky Department of Tourism and the state park system will allow contacts between those organizations and potential visitors to include information about Mammoth Cave.

Park staff will develop audio and visual presentations for locations supporting such media.

Park staff will produce publication and audiovisual public service announcements to highlight specific management issues, especially issues that significantly affect stakeholders near the park.

Road guides described in **PARKWIDE RECOMMENDATIONS** and **INTERPRETIVE AREA STRATEGIES** will interpret features of the karst biosphere reserve inside and outside the park. Park and partners will explore development of a regional tour guide that includes a route through the national park and surrounding karst region. The guide can be distributed by sale at all visitor sites that feature sales operations.

PARKWIDE RECOMMENDATIONS

ARRIVAL / WAY-FINDING

Resource Description

Wayfinding at Mammoth Cave National Park is generally well planned and easy for visitors to understand. A few areas need improvement. Lack of direction and intuitive guidance at the visitor center and hotel parking lots impedes navigation from the parking areas to the visitor center entrance.

Mammoth Cave National Park has been working with the state to improve its signage on the I-65 corridor

Current plans for reconstruction of the existing visitor center and administrative building as well as redesign of the surrounding grounds will improve way-finding. Redesign of Highway 70 to intersect with Park City Road and Mammoth Cave Parkway will direct most visitors to enter the park by way of Chaumont and Sloan's Crossing Pond. Both projects will require changes to future way-finding media.

Visitor Experience Statement

Clear, accurate signs and directions outside the park provide convenient way finding to the park by the most scenic route without creating a lot of visitor questions and confusion. Visitor arrival at the park is obvious, positive and exciting. Well-kept landscapes and facilities intuitively indicate a sense of arrival at a special place. Visual, spatial transitions will slow visitors down, or even get them to stop, setting the tempo for relaxed and enjoyable park experiences. Simplified, intuitive way-finding, including signs that are easy to see and follow, guide visitors to the developed area and visitor center as their first destination. Roads, trails, buildings and landscapes inside the park make desired travel routes easy to follow, interesting to the senses, and barrier free. Parking will be easy to find. The route to the visitor center from parking must be clear to first time users, and the appearance of visitor center buildings will attract people's attention.

Recommendations

Interpretation and orientation need to be developed over a wider area inside the park to improve way-finding from the park entrances to the visitor center.

The park will continue to work with state highway officials to improve signs on Interstate 65.

SIGN PLAN

An update of the park sign/way-finding plan will improve navigation to and through the park.

Improved signs and way-finding information will give visitors broader opportunities to safely experience and appreciate park resources and programs. The revised sign plan will focus on providing clear, accurate, convenient way-finding by the most scenic route that features examples of significant park resources. The following specific recommendations should be considered by a planning team updating the park sign/way-finding plan.

National Park Service entrance and exit signs at park boundaries need prominent display and clear identification of Mammoth Cave National Park and National Park Service. Visitors traveling from surrounding areas into the national park will find a clear distinction between areas.

Entry into the park for most visitors will include the Mammoth Cave Parkway to the visitor center parking lot. In order to relieve apprehension while guiding visitors to the visitor center parking area the few words on highway signs must be clear and consistent. Park manager coordination with the Kentucky Department of Transportation will ensure that design and text of these signs is acceptable to the park and the state.

THEMATIC TOUR GUIDES

A variety of audio or publication tours will guide visitors and interpret resources on designated thematic tour loops and other travel corridors. Thematic audio driving tours will include souvenir CDs, DVDs, CD-ROMs, or other delivery technologies developed in the future. These tour guides will provide in-depth interpretation of data from research

Future Program Description

projects as well as provide surrogate natural and cultural experiences for local and international visitors.

VISITOR CENTER WAYFINDING PLAN

The long range interpretive plan team endorses the way-finding plan provided by Beisek Design. The park staff includes talented personnel who can go forward with production of most components of the proposed plan. Park staff can request help from Harpers Ferry Center to contract production of elements of the plan that are beyond park capability. The only area of particular complexity is the proposal for a four panel orientation and tour information exhibit. This exhibit requires design, layout, and production file creation for an orientation panel and three grid templates for the tour information panels.

Other recommendations to improve way-finding are presented throughout this long-range interpretive plan.

ACCESSIBILITY

Resource Description

Mammoth Cave National Park has made significant progress in improving visitor access to facilities and resources. Brochures are currently available in three languages. Interpretation, Resource Management, and Maintenance staffs have developed a few premiere sites (Heritage Trail, Sand Cave Trail, Sloans Crossing) for Wilderness on Wheels experiences.

Accessibility guidelines and regulations are available to park staff and media/facility designers. Public law (Architectural Barriers Act; American's With Disabilities Act) establish physical access standards. The Rehabilitation Act adds programmatic access to federal requirements. Design of any new facilities constructed, such as the visitor center renovation, will provide optimum access for visitors and employees. All new media will conform to Programmatic Accessibility Guidelines for Interpretive Media (see CIP Database).

One of the most significant concerns remaining is the need to investigate possible ways to improve cave accessibility. Stairs, mountain terrain, and small cave passages restrict access for people in wheelchairs or others with mobility restrictions.

Visitor Experience Statement

The park needs to complete a comprehensive assessment of facility and program accessibility. This assessment will be used to improve physical and program accessibility by identifying small and short-term projects that can be completed in-house and long-term larger projects that will need design and construction funding.

An interpretive goal will seek universal accessibility to the greatest extent possible. The park will provide equal, reasonable access for all people regardless of age, gender, physical or mental ability, including those with sight, hearing, learning, and mobility impairments and those who do not speak English. Programs will attract diverse audiences including a diverse park work group. Families can experience many resources and activities with disabled members of their family. Visitors who cannot or choose not to participate in a cave tour of Mammoth Cave can choose from many other activities.

Recommendations

Park staff will improve services for special population audiences. They will make existing programs and facilities accessible as a high priority. They will design new programs and facilities for the highest feasible level of access.

Publications, especially the Harpers Ferry Center produced brochure and the park produced newspaper, will identify locations of wheelchair accessible and other self guided opportunities. A revised park brochure will accommodate better, larger maps that describe overlook pullouts, motor tour routes, and other accessible activities.

New exhibits designed for the visitor center will adhere to guidelines in the database section of Mammoth Cave National Park's Comprehensive Interpretive Plan. Short clips of video included in visitor center exhibits will make the exhibits more accessible to all stakeholders. Audio descriptions of exhibits, including the video clips, will increase usefulness of exhibits to all audiences.

Routine wayside exhibit evaluations by a park wayside exhibit committee will use criteria described in the database section of Mammoth Cave National Park's Comprehensive Interpretive Plan. Committee reports will recommend exhibit design and content changes necessary to meet guidelines. Consideration will be given to

Future Program Description

including audio supplements and tactile components to wayside exhibits where appropriate.

Additional sites will be evaluated by interpretive and resource management staff for "Wilderness-on-Wheels" experiences. Creating, in locations where feasible, boardwalks or hard surfaced trails will allow physically challenged visitors a chance to leave the roadway and parking areas for immersion in park resources. The ultimate goal for cave accessibility is physical access by mobility impaired visitors to representative sections of the cave. This plan recommends a study to determine feasibility of providing wheel chair access to the Historic Entrance and Travertine areas of Mammoth Cave. Until implementation of physical access park managers will implement other techniques for vicarious access. The **INTERPRETIVE AREA STRATEGIES** section of this long range interpretive plan describes several actions to provide vicarious access to cave features.

Alternative interpretation methods at facilities near areas that cannot be made physically accessible will enable all visitors to understand and appreciate the resource. Wayside exhibits and publications can bring distant, inaccessible sights to visitors in outdoor locations at trailheads or overlook parking areas. Trail descriptions on all trailhead exhibits will include levels of access.

The park interpretive program will provide multilingual information to an appropriate extent determined by interpretive managers based on current visitation. A moderate approach will initially provide fundamental information such as tour descriptions in German, French and Spanish for current and projected audiences. Continuous assessment of visitation trends will determine future need for multilingual information and interpretation.

Park interpretation managers will determine how best to provide interpretation and information to hearing impaired visitors. In addition to applying guidelines for media, they will offer training to park staff in the rudiments of sign language. A cadre call list of trained sign interpreters in the region will assist staff. When provided appropriate advance notice park staff or volunteer sign interpreters can provide assistance for hearing impaired visitors.

INFORMATION PROGRAM

Resource Description

An active information program at Mammoth Cave National Park delivers orientation and interpretation through a variety of activities and media.

Several issues need resolution to improve services to stakeholders in onsite and offsite locations.

Backcountry visitors need better information for a safe and enjoyable visit. They need awareness of content and location of visitor use opportunities. Terminology describing facilities and resources need clarification. For example, the term loops describing trails misleads visitors into simplifying the complexity of the park trail system.

Local constituents who commute through the park need timely updates as to road conditions and changes in ferry operation schedules or closures.

Park management staff needs to improve methods of providing severe weather and other hazard information to visitors. Current standard operating procedures for severe weather require assertive action.

Complex information messages challenge park information program managers to find a recognizable, understandable icon that identifies Mammoth Cave to all stakeholders. Names applied to features, functional areas, and tours do not always adequately and accurately describe the experience offered.

Visitor Experience Statement

People seeking Mammoth Cave information encounter automatic media and personal contact that easily gets them to the information they need. Information provided is simple, straight forward and facilitates easy decision-making. Visitors receive information that provides basic understanding of experience options before arrival at the ticket sales counter. They can easily identify a fundamental Mammoth Cave experience as well as specialty experiences. Their expectations for quick responses are realized. Information media and contacts with park staff introduce park themes and link those themes to regional themes and resources. Future media makes a connection between the surface and the cave system.

Future Program Description

Recommendations

The park information program will include multiple approaches that present information at several locations to meet needs of a varied audience and to reinforce information previously encountered by visitors.

The information program will adhere to the following criteria:

- Visitors arrive at the park with cave tour and backcountry information they need to make informed decisions about tours and trails that are appropriate for them given their physical condition and interest.
- Visitors are exposed to sufficient information to clearly understand options available to them.
- A system of “smart” signs will be installed at the primary park entrances or at community road intersections which allow the most convenient rerouting by motorists.
- Adequate safety information enables visitors to make good decisions.
- Weather information will be posted daily and severe weather warnings prominently displayed.
- Information visitors need is readily available in formats that meet their need.
- Information is delivered by media appropriate to content and that can be updated quickly and easily.
- Information about availability of services and use opportunities is readily available.
- A recommended introductory surface experience parallels recommended introductory cave tour experience.
- Information provided is accurate, current, and reflects recent research.

- Information provided is consistent in content and appearance.

Park information program managers will develop methods for measuring information program success. An assessment program will apply the preceding criteria. Success indicators include visitation increase, fewer accidents, more people participating in surface activities, and fewer complaints. The assessment program will also develop measurements for information quality and develop a long range evaluation tool that is effective for Mammoth Cave.

ADVANCE INFORMATION

Offsite elements of the information program will be considered successful if a high percentage of visitors receive basic information about experience opportunities before arrival at the visitor center.

The information program needs to let visitors and potential visitors know of available surface activities through pre-arrival media.

Visitor use data available from the National Reservation Service contractor will be used to identify key markets for application of advanced information.

The World Heritage and Biosphere Reserve programs need a significant presence in the basic information program, especially components of the program delivered to audiences in the Kentucky karst region. The program can also identify places international visitors hub upon arrival in the United States and focus pre-arrival information designed for international visitors at those locations.

EXPERIENCE PACKAGES

Park interpretive managers will assemble experience opportunities into easy-to-use, three-tiered packages (described in **INTERPRETIVE AREA STRATEGIES – CAVES**) and develop information media to help visitors quickly choose the package appropriate for them. A site bulletin including all packages for introductory, general, and specialty options will include surface and cave activities in the same package. The bulletin will describe the activities, the route, time required to complete them, difficulty, and recommend options for various audiences. Separate site bulletins or tour guide for each option will provide visitors more information about the option of their choice. The park newspaper will also describe options and provide simple maps and illustrations that show the nature of the experience. The

Future Program Description

package media will present information about surface hikes and other activities to the visitor in similar ways as the cave tours.

MEDIA

All media, from the information presented on the monitors to the waysides on the surface, should continue to be designed and created so that they work in concert in terms of design and information. Media style will be consistent (color, format, etc) throughout. Information media will connect surface and cave features and stories. Media systems developed will be capable of evolving with frequently changing experience opportunities.

BACKCOUNTRY

Trail features such as changes in elevation, difficulty, and safety issues need complete description at visitor contact facilities and at trailheads. A combination map/information will be developed and distributed as a site bulletin by all park personnel and at backcountry trailheads.

An information video may be produced for showing to people seeking a backcountry permit. Other specific resource issues may merit videos addressing particular uses such as horseback riding.

EDUCATION PROGRAM

Resource Description

Designation as a World Heritage Site and International Biosphere Reserve underscores the educational potential of the park and its surrounding environs. Rural communities, intensive agriculture, transportation corridors, and light industry within the hydrological boundary of the park's biosphere can affect park resources. An effective and proactive curriculum based education program can increase understanding about the importance of protecting natural systems.

Park curriculum-based activities were first developed for K-3 grades. Second priority development completed activities for 4-5 grades. Curriculum activities for 6-8 grades were recently completed. Special activities treat The Man and Biosphere Program, fire management and paleontology.

The park curriculum-based education program was previously staffed with six people; now the program has two permanent staff. Loss of four positions returns the program to staffing levels of ten years ago. The significant reduction in staffing impacts park ability to respond to needs of regional education communities. Pre-site visits to schools are attempted when staff is available; post-site activities presented by park staff at schools are not feasible under current staffing levels. Seasonality of staffing needs creates difficulty of maintaining staff at appropriate levels.

The park has established cooperative relationships with Western Kentucky University and several local schools. The park cooperates with the university to present teacher workshops including block education classes in which students spend one day at the park. The park staff will explore opportunities to expand the program as the Mammoth Cave International Center for Science and Learning develops. Cooperative agreements with schools reflect commitment of the entire school to participate and maintain relationships with the park. Local partnership schools currently participate in activities at an education facility near the visitor center. School groups and Western Kentucky University's Karst Field Study classes use a facility at Maple Springs for overnight on-site experiences. Current participation in continuing education courses is impacted by changes that make teacher training less discretionary. Park education staff must work closely with schools to develop a program of teacher training that reflect current schools needs so schools can obtain permission to participate in park education activities. A current issue for schools and the park is the requirement for teachers to justify any trips away from the school facility.

Kentucky education requirements frequently change. Park staff must remain knowledgeable of state requirements and continually update the park program to remain viable as a resource for curriculum-based learning opportunities. A Master Plan for Kentucky Environmental Education mandates a better working relationship with some colleges in the state and certification for Environmental Educators. The informal certification initiative is appropriate for park training that allows all park interpreters to be certified. The Kentucky Environmental Education Council initiated the program and will administer it.

Future Program Description

A Cooperative Agreement has been signed with Western Kentucky University to establish *The Mammoth Cave International Center for Science and Learning*. This center is to be located in the Maple Springs Ranger Station and will include research and residential facilities to house visiting researchers as well as provide on-site accommodations for classes from the primary to the graduate level. The Natural Resource Challenge calls for establishment of a research coordinator and an education coordinator. The cooperative agreement states that the research coordinator will be cost shared with Western Kentucky University. The coordinator will be a university employee with an office at the park. It has also been agreed that the education coordinator will be a National Park Service employee with office at the park.

Visitor Experience Statement

The mission of the National Park Service is to protect and preserve resources for future generations. The park's education program is the vehicle for those future generations to become aware of the natural environment, to learn about the historic and cultural environment, to gain knowledge of the National Park Service, and to become protectors of their American Heritage. Participants in Mammoth Cave National Park curriculum-based education program will learn to connect people, parks, and natural and cultural resources.

The future education program will present activities that are compatible with classroom needs. Schools participating in the education program can choose from a variety of activities appropriate to a variety of curricula needs and group ages from kindergarten to high school. The program will validate teacher instruction by offering opportunity for student confirmation that instruction is accurate and applicable.

The Environmental Education Program will adhere to the following guidelines.

- The education program will be directed at accomplishing the National Park Service management objectives and education goals defined by the Kentucky Education Reform Act.
- Curriculum will be developed with direct input from the educational community to ensure usability and effectiveness.
- Curriculum will present the park and its Biosphere Reserve as a unified ecosystem defined by the surrounding karst aquifer.

- The environmental education coordinator will provide in-service workshops for all teachers selected to participate in the program.
- Fundamental components of the program will include classroom preparation before and follow-up activities after the park visit.
- A member of the environmental education staff will provide a minimum of one offsite visit to all schools within the biosphere boundary during classroom preparation for the park visit.
- Curriculum guides and supporting educational materials will be developed for each grade level participating in the program.
- The environmental education staff will evaluate each class; teachers will provide a written report on the curriculum and park staff.

Recommendations

To facilitate connections among people, parks, and natural and cultural resources park managers and staff will strive to accomplish the education initiatives described in the park's education plan and this long range interpretive plan. The following guidelines supplement the proposals described in the current education plan.

CONTINUE USING EXISTING FACILITIES AND PROGRAMS AND DEVELOP NEW ONES AS TIME AND FUNDING PERMITS.

The education program will fit established Kentucky curricula and reflect national standards. Pre-visit activities will prepare teachers and students for a beneficial visit. Post-visit activities will reinforce topics discussed at the park to extend learning experiences throughout the school year. Time spent at the park will include curriculum-based activities and an immersion experience with park resources.

Current travel restrictions and school budget cuts experienced by most school districts emphasize a need for park staff to take education activities to schools. The park program will focus on offsite activities (personal and non-personal) with the culminating activity being a visit to the park.

Integration of content areas will be a prime focus for future program development. New activities developed for the education program will reflect real-life applications for compatibility with current school

Future Program Description

requirements. Park and school staffs must be aware of various learning styles and develop activities that respond effectively to as many styles as possible. Format of activities will provide multilevel opportunities within each activity to reach different levels of intelligence and interest universally found within each participant group.

Park staff must explore potential distance learning opportunities. Cooperation with regional schools and national education organizations will identify current and future technologies planned to link schools to other education resources. Park education managers will prepare a proposal to implement a distance learning program in partnership with area school districts. A linked education program will enable students to interact with educators and scientists via the Internet and other distance learning venues. Potential to establish live satellite links between schools and interpretive programs being conducted in the field will be explored. Education program managers will revise and reprint the education plan and assess potential to redesign the program to reach a global audience.

The future education program will enhance partnerships and affiliations with universities, public schools, and communities to create new curriculum-based activities.

Educational resource kits will include illustrated natural and cultural history themes and topics, oral histories, a seasonal almanac, picture gazetteer, pre- and post-visit CD ROMS and DVDS, and a teacher's guide and bibliography.

INVOLVE AN EDUCATION ADVISORY GROUP IN PROGRAM DEVELOPMENT.

An education specialist will coordinate the curriculum-based education program and attend faculty meetings, in-service workshops, seminars, and teacher meetings. An advisory and implementation group will be established to provide outside perspectives to help park staff generate new education program ideas. The group will include representatives of school districts participating in the program, education associations, university professors and state department of education representatives. Group members may also assist with classroom instruction and presentation of teacher workshops. Several classroom teachers will be included in the advisory group to assure that activities developed align with classroom requirements.

IMPLEMENT PROFESSIONAL TRAINING AND INTERNSHIP PROGRAMS FOR EMPLOYEES AND EDUCATION PARTNERS.

The future park education program product should be well-educated teachers. That requires a change in focus from the current goal of a “well-educated student.” The goal will be educated, confident teachers knowledgeable of park themes and stories who can present education activities independent of park staff. Without special training most teachers do not feel comfortable leading outdoor trips. Future teacher training sponsored by the park will include techniques to help teachers feel comfortable in conducting outdoor learning experiences in outside-classroom environments at the park or elsewhere.

Park produced teacher training will focus on future special education and K-8th grade teachers at Western Kentucky University while they are still in college learning how to teach.

All new teachers participating in the education program will receive copies of activities developed by experienced teachers and successfully implemented in an outdoor setting. Park education staff must work closely with schools to develop a program of in-service teacher training that reflects current school needs so school administrators will allow teachers to participate in park education activities.

Funding sources will be explored when ever possible to provide school systems with funding for payment of substitute teachers to allow class room teachers to attend training during regular work hours

Park staff will explore opportunities to establish a cooperative program with Western Kentucky University and other colleges and universities for student teacher internship and other training. Students participating in approved education classes could spend time at the park honing their outdoor teaching skills.

DEVELOP A FUNDING STRATEGY FOR SUPPORTING ADDITIONAL EDUCATION PROGRAMS.

Education program managers will seek appropriated funds to meet current and future demands for educational services. Park staff will commit to find and tap varied, sustainable funding sources that will enable them to maintain current programs and develop new ones. Park

Future Program Description

managers will create an interdisciplinary team of park staff to identify cross-division education projects and funding sources for them.

LINK CURRICULUM-BASED EDUCATION PROGRAM TO MAMMOTH CAVE INTERNATIONAL CENTER FOR SCIENCE AND LEARNING.

The Mammoth Cave International Center for Science and Learning education coordinator and the environmental education program manager will develop operating procedures to facilitate effective interactions.

ESTABLISH AND MAINTAIN CURRENCY.

An effective education program will require frequent curriculum refinement and constant interaction between teachers and park staff so both can quickly learn of changes in program activities.

Future program development will assure that activities are compatible with classroom need. Park education program managers will establish verbal or written teacher assessment of the program.

Current trends in education will guide program evolution.

Park staff will contact Kentucky Department of Education to learn the state's current testing subject and schedule of additional assessments.

PARTICIPATE IN AND SUPPORT KENTUCKY'S ENVIRONMENTAL EDUCATION MASTER PLAN.

PUBLICATIONS

Resource Description

Publications related to Mammoth Cave karst region subjects are readily available from commercial sources. The park cooperating association and concessions offer an excellent array of high quality products for sale. A park newspaper published annually provides trip planning and on-site interpretation. Seasonal schedule inserts are produced four times a year. Several topical handout publications are currently available. Brochures describing visitor opportunities in the Mammoth Cave region may be obtained at an information desk in the visitor center. Although a large number of general items are available,

site-specific material is limited and should be increased. The primary brochure produced in cooperation with Harpers Ferry Center needs revision. Backcountry handout publications planned for development will meet identified deficiency in backcountry information.

Visitor Experience Statement

General park publications and site bulletins will describe most park interpretive opportunities and all themes. Publication design will appeal to visitors and be useful as they travel through the park. Some publications formatted and printed on a flexible schedule will assure that visitors have current information about changing programs.

Recommendations

The park will continue to make available to visitors a variety of up to date publications. Park staff will implement the publication plan as soon as possible.

Staff will revise the current publication plan to reflect long range interpretive plan recommendations. The plan will be reviewed annually and fully revised every five years.

The cooperating association will continue to offer current products and look for new products to augment or replace existing inventory.

Park staff will also develop an inexpensive "rack card" for distribution in response to mail/telephone requests and for distribution through partner information and visitor service providers.

FOLDER

A new folder will replace the primary information/interpretation brochure produced by Harpers Ferry Center and distributed by the park. Additional space will accommodate new text, redesigned map and expanded graphics to encompass development proposed in this long-range interpretive plan and other park planning documents. The folder will build from the new visitor center museum and information exhibits and link the museum and information media to park resources. The new folder will more effectively identify interpretive opportunities available throughout the park. The folder will only include information that is not likely to change.

Future Program Description

NEWSPAPER

Future editions of the park newspaper will feature descriptions of the three-tiered surface and cave activity packages described elsewhere in this plan. Dividing the paper into sections for different visitor experience options will emphasize that the park is more than a cave. The editor will assign space according to importance with the introductory experience description occupying more space.

SITE BULLETINS

Park staff will review all publications for accuracy and will assure that design reflects a family resemblance based on the National Park Service Identity. Additional site bulletins will be developed as needs are identified. Suggestions for topics include new primary interpretive themes developed during this long range interpretive plan process.

AUTO TOUR GUIDES

Tour guide publications interpreting surface resources may guide visitors on designated tour loops traversing different areas of the park and karst region. Each thematic driving tour will include a booklet, CD, DVD, CD-ROM, or other new technology. These tour guides will provide in-depth interpretation of data from research projects as well as provide surrogate natural and cultural experiences for local and international visitors. They will interpret significant resources and stories along designated roads and provide detail for visitors who want more information than available in the expanded park brochure. Inexpensive publications will provide interesting interpretation, effective way-finding, and an attractive souvenir that extends enjoyment and connection to the park long after their visit.

WAYSIDE EXHIBITS

Resource Description

A Wayside Exhibit Plan identifies sites and stories appropriate for interpreting natural and cultural features with the wayside exhibit medium. Wayside exhibits have been placed at overlooks, near trailheads, along trails, and at historical sites and structures. A kiosk will be available at the Heritage Trail in 2004 providing orientation to

trails in the area. Still, some appropriate locations do not have wayside exhibits. In some cases the design, message, and site of existing exhibits need revision. Front country and backcountry visitor use locations need new and revised bulletin boards and trail head information. For example, improved information exhibits, some with kiosk shelter, are needed at major land and water trailheads.

Visitor Experience Statement

Wayside exhibits can play a significant role in informing visitors about resources and the management actions necessary to protect and perpetuate them for future generations. Waysides throughout the park will present a family resemblance easily recognized by park users. Exhibits will enhance visitor understanding of connectivity between resources and the importance of resources to all stakeholders.

Recommendations

WAYSIDE EXHIBIT PLAN

The park currently handles wayside interpretation independently. They have a comprehensive wayside exhibit plan and will continue to execute the plan. The **INTERPRETIVE AREA STRATEGIES** section of this plan provides detailed descriptions of specific wayside exhibit and kiosk locations.

BIKE TRAIL ORIENTATION EXHIBITS

Orientation exhibits at major bike trail access points will be arranged in an exhibit kiosk. One exhibit will present a detailed orientation map of the bike trail illustrating all major features of the trail with distances. A "You Are Here" approach will help visitors understand the relationship, complexity and solidarity of all sites. A second panel can focus on the history of the Mammoth Cave Railroad and the communities and sites it connected. The exhibit kiosk complex can also contain a bulletin case with bike safety and resource protection information specific to its location and it can provide information about hours of operation of facilities not always open to visitors.

BACK COUNTRY TRAIL EXHIBITS

Trail exhibits at major backcountry trail parking areas will include area-wide maps and information to identify complex trail systems. Positioned at central, heavily used locations they assure all visitors

Future Program Description

opportunity to learn about walking experiences. The exhibits will present minimum impact techniques and resource management issues to help visitors reduce adverse impacts and increase their knowledge about safety. Standard 36"x48" upright orientation panels and in ground bulletin cases or similar products arranged in covered kiosks can provide specific static trail information and changeable postings.

FRONT COUNTRY TRAIL EXHIBITS

Site-specific exhibits at each front country trailhead will identify trail route, length, difficulty, estimated time, safety considerations and photographs of natural or cultural features that can be seen from the trail. The park offers short interpretive trails that lead to a variety of features. Waysides are also appropriate at some features along the trail. Longer trails not classified as short loop nature/history trails will be interpreted by other means if interpretive media is thought necessary. For, example a trail brochure would be more appropriate at trails such as Cedar sink or selected trails in North Side interpretive area.

An interdisciplinary team of park staff will periodically review wayside exhibits and propose appropriate revision, replacement and additions.

RESEARCH / PLANNING

Resource Description

Mammoth Cave National Park has a long-standing and well-organized research program. Park staff, cooperating researchers, and contractors constantly seek new information through research partnerships. An active planning program is illustrated by multiple projects operated or supervised by park staff simultaneously. Proposals for the Mammoth Cave International Center for Science and Learning will advance an already active research and planning program even further.

Visitor Experience Statement

Interpretation and education programming will be based on current research that includes new scientific discoveries. Scientific knowledge will be made available to staff and other audiences in useable format as soon as possible following acquisition. Park staff has adequate, timely knowledge needed to adapt to changing visitation patterns and visitor interests and expectations. Research provides information that is

promptly made available to stakeholders to increase their understanding of the significance of park resources.

Recommendations

Park staff will program the following specialized and detailed plans to implement proposals in this long range interpretive plan.

ANNUAL IMPLEMENTATION PLAN

Interpretive managers will prepare annual work plans based on the long range interpretive plan and funding projections. Work plans will briefly describe the current program, management issues facing interpretation, new individual service plans, and status of the implementation recommendations in the long range interpretive plan.

VISITOR STUDIES

Scientific studies to identify changing demographics will be scheduled on a 5-10 year cycle depending on funding. Frequent use of other evaluation techniques will supplement cyclical studies to assure that services are tailored to current customers. The **APPENDIX** of this plan includes techniques recommended for Mammoth Cave.

REVISED WAYSIDE EXHIBIT PLAN

A design and production plan will be developed as soon as possible to implement new wayside exhibit proposals in this document. As additional exhibit needs are identified the plan will be revised.

MUSEUM EXHIBIT PLAN

A design, production and installation plan for the visitor center lobby and exhibit area is needed as soon as possible. The plan will include label copy, design elements and graphic components for new exhibits.

AUDIOVISUAL PLAN

Park staff will program detailed plans to guide production and installation of audiovisual components in the visitor center exhibit area. Audiovisual and exhibit plans will be scheduled concurrently.

Future Program Description

PMIS SUBMISSIONS

Submissions will be prepared for projects proposed in this plan that may be appropriate for National Park Service funding.

INTERNATIONAL BIOSPHERE RESERVE AND WORLD HERITAGE SITE PROGRAM

Resource Description

Mammoth Cave National Park was designated a World Heritage Site in 1981 and an International Biosphere Reserve in 1990. The World Heritage designation was based on three of four natural criteria: stages of the Earth's evolutionary history, superlative examples of natural features, and ecosystems in which concentrations of plants and animals of universal interest and significance are found. The International Biosphere Reserve Designation reflects not only the world class status of the cave's length, but the vast amount of research that has been conducted in understanding the region's karst hydrological systems. With the national park designated as the reserves protected area, the direct recharge basins outside the park were designated as zones of cooperation.

In 1996 the biosphere boundary was expanded to include the hydrologic boundaries south of the Nolin River and north of the Barren River. This expanded area became the interaction zone that indirectly influences the protected zone. The Barren River Area Development District became the Mammoth Cave Area Biosphere Reserve secretariat and the district's Natural Resource Council served to coordinate and oversee reserve programs. Biosphere Reserve partners include Western Kentucky University, the United States Department of Agriculture, the Army Corps of Engineers, the Tennessee Valley Authority, the Environmental Protection Agency, the Kentucky Economic Development Administration, the Resource Conservation and Development District, and the United States Geological Survey.

In 2003, the park made a significant effort to revitalize the Biosphere Reserve Council. The Council has been combined with the Barren River Area Development District's planning committee and has refined and recommitted to the purpose, mission, and objectives of the Biosphere Reserve Program.

Visitor Experience Statement

Visitors to Mammoth Cave National Park would be aware of Mammoth Cave's national significance as a national park protecting natural and cultural resources. They would also be aware of the area's international reputation as the exemplary example of karst development and hydrologic research. Visitors should come away with an awareness of not only Mammoth Cave role in the region's karst aquifer, but also its role as a living laboratory to gain understanding of karst groundwater dynamics and its impact on human community's quality of life. Local community leaders and stakeholders should understand the Man and Biosphere program and understand its potential to be used as a framework for addressing regional environmental issues.

Recommendations

World Heritage and Man and the Biosphere plaques will be displayed in a prominent location in the Visitor Center plaza. Where ever practical the World Heritage and Man and the Biosphere logos will be displayed on publications and other materials provided to visitors.

Interpretive Managers will actively participate in the Mammoth Cave Area Biosphere Reserve Natural Resource council and work to accomplish the Biosphere Reserve's Education goals and objectives.

The program service personnel will routinely use the World Heritage and Biosphere Reserve designations to reinforce the value and significance of the park's resources.

All training for park interpreters will include discussion of the importance and significance of these designations. Training participants will be able to cite benefits of both programs.

The park's education program will focus on and off-site programs at school systems within the Biosphere Reserve boundary. The curriculum based Biosphere Reserve Teacher Activity Guide will be distributed to interested teachers within the biosphere boundary.

Interpretive management and supervisory program service personnel will conduct off-site programs on the Man and the Biosphere program utilizing the park produced Biosphere video. They will seek opportunities to contact local business and community leaders.

Future Program Description

The World Heritage Site and Biosphere Reserve designations and programs will be included in the new permanent exhibits planned for the visitor center.

PARTNERSHIP OPPORTUNITIES

Resource Description

The park has extensive formal and informal partnerships with other organizations in the Kentucky cave area. Seven general agreements exist between the park and local schools. The park cooperates with Western Kentucky University to present block education classes with students spending one day at the park. Participation of local teachers in continuing education courses is impacted by changes that made teacher training less discretionary. Park education staff must work closely with schools to develop a program of teacher training that reflect current schools needs so school administrators will approve teacher participation in park activities. Interpretation partnerships include many associations with visitor service providers in the karst region, such as the Kentucky Cave Association, the Caveland Marketing Association, and the American Cave Conservation Association.

The description of recommended partnership opportunities expresses the interest of Mammoth Cave National Park in collaborating with many visitor service providers within and outside the park. Successful implementation of this long-range interpretive plan depends on continuation and expansion of existing partnerships and initiation of new ones, especially with visitor service providers in the immediate vicinity of the park. Positive cooperation among all providers of tourism services will help each respond to the opportunities and challenges that face them.

Visitor Experience Statement

Many sites within the south central Kentucky area offer visitor experience opportunities. Visitors will participate in an integrated program of activities produced by the National Park Service and partners to offer a complete, balanced karst experience. Integration of efforts will complement and support all cave community programs. Outside perspectives will enable park staff to generate new interpretation and education ideas. Visitors will receive up-to-date information from all partners and other visitor service providers

through a program of visitor services and activities inside and outside the national park that reflect coordination and efficiency. Travelers will find a National Park Service presence and a cooperative feel among all partners that welcomes visitors to the cave region and Mammoth Cave National Park. A regional partnership provides a sense that this is a wonderful area and all visitor service providers are cooperating to provide high quality visitor experiences.

Recommendations

VISITOR SERVICE PROVIDERS

Partnerships among visitor service providers inside and outside the park will be strengthened to enable all partners to improve visitor services. Internally park managers will provide appropriate information to all staff including National Park Service and concession employees. Park staff will reach out to canoe liveries to provide orientation to livery staff and training to improve quality and consistency of park information provided to guests. Visitor service programs will share and perpetuate cultural history of the region. The Cavelands Heritage Center in Park City will involve cooperation between the national park and other area tourism entities. A 31W Heritage Corridor program will emphasize Highway 31W as the Road Less Traveled. Interpretive management will support interpretive efforts as appropriate at the American Cave Museum, in the development of an International Show Cave Museum at Diamond Caverns, and at the Battle for Bridge Civil War Preserve.

MAMMOTH CAVE

Interpretation and Education management will work actively with other park management groups.

Cooperation with Science and Resource Management will advance establishment of the Mammoth Cave International Center for Science and Learning, improvement of park library resources, and integration of the latest research findings into public programming.

Cooperation with External Programs and Communications will facilitate implementation of the park publication program, wayside plan, and LAN digital library resources.

Facility Management and Interpretation and Education partnership will plan and implement the Cave Lighting Renovation Project, the

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renovation of cave trails, and the planning and construction of the Visitor Center and Fee Management Area renovation project.

Partnerships with Fee Management can establish annual fee reviews and proposals, analyze visitor trends, implement collection funded information services, and manage fee demonstration account assigned to interpretation.

Cooperation with Law Enforcement and Emergency Services can facilitate implementation of a new severe weather plan, develop and implement the Backcountry Use plan, strengthen in-park cave rescue capabilities, and enhance homeland security measures.

EASTERN NATIONAL

The park's natural history association is a major provider of information, interpretation, and education for Mammoth Cave National Park. The organization is a non-profit cooperating association of the National Park Service that operates a sales facility for interpretive materials in the park. It also markets interpretive materials worldwide through an electronic bookstore linked to the park computer site and by mail order catalog. Proceeds from sales benefit national park interpretive, educational, cultural, and science programs.

Interpretive Managers will continue to act as the park Eastern National coordinator, seeking authorship of site specific materials for sale and diversification of the inventory of sale items with educational value.

WESTERN KENTUCKY UNIVERSITY

Western provides a high percentage of new teachers hired by school systems in the Mammoth Cave Biosphere Reserve. Therefore, the introduction of principles of outdoor education and the significance of Mammoth Cave National Park as an educational resource to undergraduate students at the university is a primary goal of the park education program. The partnership between the park and the university is expected to remain strong. As facilities at the Mammoth Cave International Center for Science and Learning become available, university faculty will be invited to participate. The park will cooperate with the university to expand partnerships to include demonstration of outdoor education principles to undergraduates at the university and to involve university faculty and students in research partnerships at the park.

LOCAL SCHOOL DISTRICTS

Mammoth Cave National Park has several Memorandums of Understanding with individual schools in local school districts. Schools have agreed to integrate the park's curriculum based program into all grade levels. The park commits to providing year round on-site programming and teacher training. As teachers become familiar with the curriculum and park resources they take more of a leadership role in conducting much of the field exercises during on-site visits.

CONCESSIONS

Concessions operating in the park offer many visitor services. Concession operators offer lodging, food service, gifts, auto service, camp store, transportation to cave entrances, and boat tours. Opportunity exists to continue and enhance cooperative visitor services. The concession can provide space for exhibits or information displays produced by park staff. Concession staff can distribute printed information to visitors and respond to visitor requests for verbal information. Park and concession staff will cooperate to develop innovative methods of providing additional visitor services described in **INTERPRETIVE AREA STRATEGIES – CONCESSIONS** section of this plan.

RAPTOR REHABILITATION OF KENTUCKY, INC.

A memorandum of understanding is being drafted with Raptor Rehabilitation of Kentucky, Inc. for the consistent long-term care of two birds of prey currently under educational permit to the park. These birds will be housed on the property of Diamond Caverns under the care of Ms. Susan Berdeaux. Ms. Berdeaux will be enrolled as a volunteer to Mammoth Cave National Park and will be responsible for providing training to park staff for routine care and program handling. Raptor Rehabilitation and the park will promote each other's mission for the conservation of wildlife.

OTHER PARTNERSHIPS

The national park staff will explore partner opportunities in the karst region. A variety of cooperative interpretation activities may be developed with partners inside and outside the park. Park staff will coordinate efforts to provide Internet and telephone links among park and regional visitor service providers. Partnerships will be sought with other regional school districts to encourage education programs, with

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friends group to assist interpretation, and with professional/educational organizations to conduct research, resource management, and visitor surveys. Activities may include sharing of expertise and funding for training, historical and natural research, special events and seminars, exhibit planning and development, site promotion, and tours. Visitors and regional residents will benefit from expanded, multifaceted visitor experience opportunities. Integration of interpretive themes will present a more complete, balanced story and resources of each partner will be used more efficiently.

PERSONAL SERVICES

Resource Description

Personal services, especially guided cave tours led by uniformed rangers, have been and will continue to be an important part of the Mammoth Cave interpretive program. This is due to safety concerns inherent with a cave environment and demonstrated resource damage when visitors are unattended in small cave passages.

Previously, surface activities have been secondary to cave tours. The variety of personal service activities currently available to visitors includes cave tours presented in guided and attended station formats. Park staff conducts or coordinates education programs on and offsite. Surface activity topics currently presented to visitors include bats, research, tourism, caving, Floyd Collins, raptors, history of cave exploration, archeology and birds. Many other topics are available and appropriate. Current program activities for retention and expansion include campfire programs, Sand Cave Almanac interpreting Sand Cave and cave wars, children's programs, and Ranger led hikes at Sloans Crossing, River Styx Spring, Cedar Sink, Turnhole Bend, and Echo River Springs.

The interpretive division experienced a significant reduction in number and grade of personnel in recent years. Loss of subject to furlough and return of staff to seasonal positions result in independent program development by GS 4/5 guides instead of GS 9 Park Rangers as appropriate. This loss also limits interpretive manager ability to develop personal service activities for surface interpretive areas.

Visitor Experience Statement

Park managers will optimize personal service programs using paid staff, volunteers, interns, and the STEP Program. This diverse work group will make personal service activities palatable to diverse audiences. Personal contact between the interpreter and the visitor has several advantages over most other media. Personal interaction can more effectively connect surface resources and stories to sub-surface resources and stories. The interpreter can immediately adapt each presentation to the needs of individual audiences. Park staff can provide access for visitors to areas they otherwise could not visit. They provide visitors a feeling of safety and security that introduces them to initial new experiences and encourages them to further explore park resources on their own. Rangers provide in-depth information and they can present specialized activities that focus on seasonal changes.

Recommendations

Personal services related to cave operations are described in **INTERPRETIVE AREA STRATEGIES – CAVE** section of this long range interpretive plan.

An enhanced marketing program will inform visitors of personal service activities available throughout the park surface interpretive areas. Marketing of personal service activities will target the following audience categories:

- Short-term day users – These visitors participate in close-in, self-guided or guided activities such as Sloans Crossing and Heritage Trail. Information about short term day use activities will be focused at the park visitor center.
- Longer stay – These visitors will have opportunity to participate in surface guided interpretation of three hour duration with tour size limited to shuttle bus capacity. The tour will present a broad-brush treatment of landscape and culture of the karst region. Visitors can also choose to combine several short-term opportunities into extended experiences appropriate for a longer stay. Information provided by web site and other distance learning media will reach potential longer-term visitors.

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- Repeat visitors / local constituents – This audience can participate in seasonal programs that link and build from one activity to others. Some organizations (Kentucky Ornithological Society) present special activities, such as bird walks, because the park does not. Additional activities developed by the park and partners, such as cemetery tours, will provide opportunity for increased dialogue and enhanced respect for and attention to local cultures and sensitivities. Marketing in local papers and radio and by personal visits to service providers will give local constituents and potential repeat visitors a reason for wanting to participate in national park activities.

Park staff will consider taking personal service activities to local people that may not visit Mammoth Cave. Interpreters and other park employees can talk with park neighbors about current activities in park operations – interpretive programs, recent research findings, management activities, and planning. Topical programs for local audiences can include air quality, wildlife in park, better information about management decisions, and dealing with threats outside park. These activities will help neighbors understand park manager and staff actions, provide basic understanding of park activities and values, and alleviate misconceptions about the park. Interpretive activities provided by park staff can reach the total population; manager interactions with community leaders can treat the same topics on a different level.

Park interpretive managers will routinely evaluate all personal service activities and adapt as needed to assure thematic depth and diversity. Continuous appraisal will focus activities on specific resources and compelling stories and assure that visitor needs and management goals are met with the greatest possible effectiveness. Park staff will regularly monitor visitor use in all areas of the park and develop personal service activities in response to changing visitation patterns. They will develop appropriate activity scheduling to meet needs of current audience and maintain consistent programming. Managers will make sure all personal service presentations are factually correct, not manipulative, and build on the interest of the audience. Presentations will offer opportunities for each member of the audience to connect their interests with the meanings of the resource.

The current practice of staffing from multiple sources – guides, STEP students – creates opportunities and challenges for personnel scheduling. Future plans will respond to the park need for consistency in staffing. Staffing will emphasize a National Park Service uniformed

Ranger presence in keeping with the requirements of the Messaging/Identity Program.

The personal service program will encourage and facilitate operational division cross over. Interpreters will request and use information from other division staff to present to the public in an interpretive format. Staff of other divisions and guest speakers from outside the park who are interested and able can present programs to park staff and the public.

The park personal service program will not compete with programs and activities provided by other visitor service providers in the karst region. Interpretive program managers can however offer assistance to service providers outside the park to assure that their presentations accurately reflect park resources and programs. Park and non-park visitor programs will reflect cooperative ventures that provide audiences a complete karst region experience without unnecessary duplication.

The national park training program will include interpretation components that focus on content, accuracy, completeness, and interpretive and communication skills necessary for preparing and presenting programs and activities. Staff training, including customer service training, developed cooperatively among National Park Service and partners will help each entity more effectively interact/relate with stakeholders. The training program will also encourage and facilitate employee attendance at conducted visitor activities where they can informally learn about visitor services. Training components will include official and social networking through cross-division and interagency activities, interdivisional liaison and communication, and cooperative programming. Training elements appropriate for volunteer docents will increase the number of park activities provided by volunteers.

Interpretation and education managers will complete individual development plans for all subordinate staff. Each plan will include training recommendations for appropriate interpretive competency training elements. All staff lacking the training required to meet competencies established for their position will receive that required training as soon as possible. Managers will program training required for promotion to the next grade when funding becomes available for supplemental training.

INTERPRETIVE AREA STRATEGIES

Based on key natural features the park has been divided in the General Management Plan into three major resource areas: Mammoth Cave Plateau, River Valleys, and Hilly Country. That plan seeks to diversify park use by providing visitors a variety of opportunities to experience each surface resource area. This Long-range Interpretive Plan further divides those three resource zones into eight geographic interpretive areas: Visitor Center, Developed Area, Concessions, Caves, River Corridors, Road Corridors, North Side, and South Side and Flint Ridge. Resources and visitor experience opportunities that reflect the distinctive character of different areas of the park define interpretive boundaries. **INTERPRETIVE AREA STRATEGIES** describes resources, experiences, and recommendations for each area.

VISITOR CENTER

Resource Description

The visitor center currently serves as the focus area of most park activities. As a result the center and surrounding developed area often experiences visitor congestion during the busy season. People congregate in the visitor center to obtain information and to wait for cave tour departures. Personal services and limited media inside and outside the building deliver information from an information desk, signs, and audiovisual screens. The building also contains a sales area for interpretive materials operated by a cooperating association and a cave tour ticket sales area operated by the National Park Service. The 150 seat visitor center auditorium seldom fills to capacity, indicating that the space is not effectively used.

The visitor center building as currently sized and tasked does not carry out information and interpretation functions at the optimum level. Space and media inadequately responds to visitor need for information about a complicated menu of experience options. Many visitors arrive with the assumption that Mammoth Cave, like most other caves, offers one tour; their stress elevates when they learn that they must select from many choices. Visitors have difficulty sorting different cave tours and surface activities to choose a desired experience. The confusing array of tours, long ticket lines in a confined space, frustrating sellout of tours, and interpretive media shortcomings contributes to the visitor

center need for improved visitor service.

Planning for a major renovation of the existing visitor center began in 2002, with construction scheduled for between 2005 and 2008. Relocation and expansion of the ticket sales and information areas will create space for a dedicated exhibit area. Space for sales publications and other interpretive items will also increase. The reconstructed visitor area will improve operation of current functions in the building and provide a visitor friendly space to interpret primary themes established for the park in this long-range interpretive plan.

Visitor Experience Statement

Visitors will have access to a visitor center offering efficient, easy-to-understand orientation, adequate exhibit space, a well designed and efficient ticket sales area, a sales publication display, and good spatial relationships between functional areas. Signs and facility design will clearly identify the entrance to the visitor center. Improved information and orientation provided by personal services and media will help visitors make decisions as quickly and painlessly as possible. People will spend less time in decision-making so they have more time to experience park resources, media, and interpretive activities. Experiences at the visitor center will complement interpretation provided in the cave and on the surface throughout the park.

The visitor center will present a welcoming atmosphere characterized by clean facilities and high-quality customer services that accommodate all visitors. Helpful, friendly staff invites visitor and park neighbor participation in a variety of activities. A fully accessible building and media are family friendly and informative. Engaging design includes attractive formats that provide peaceful experiences. Logical floor plans and simple signs facilitate way-finding without imposing physical or intuitive barriers. Traffic flow corridors control visitor actions and enable them to easily focus on what they need.

The visitor center provides opportunity to vicariously experience parts of the park that are not otherwise accessible. Media and personnel provide effective, efficient orientation, basic interpretation, and safety messages that contribute to a positive experience.

Basic way-finding information will connect the visitor center to park sites, facilities, and resources. Clear directions and basic interpretation of primary themes encourage patrons to visit other park sites.

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Activities at the visitor center are appropriate for a single park visit or repeat visits. Different levels of information, including after-hours information provided outside, meet the needs of most audiences. Visitors can choose from a variety of exhibits and audiovisual media to make a basic or complex connection to resources based on their level of interest. Visitors can also select from many theme-related interpretive items from a book sales area to expand their knowledge of area resources and programs.

The visitor center will introduce people to Mammoth Cave National Park and the National Park System. Information media will identify missions of the park and National Park Service and relate those missions to park resources and agency values. Visitors will clearly understand the partnership relationship between the National Park Service and the public to protect the values of Mammoth Cave.

Recommendations

The visitor center will provide initial orientation to the park and interpretation of ecosystems, resources management, and human interactions with the park environment. Concise, basic information will let visitors move into cave and surface experiences quickly if that is their agenda. Detailed information and interpretation will be available in the museum and sales area for visitors with more time. Description of several experience options encourages apprehensive visitors to take initial steps toward immersion in resources throughout the park.

INFORMATION

A tiered decision-making information program at the center will enable visitors to acquire information in small bites that build as they progress through the visitor center complex. Outside the building they can receive basic orientation. In the Lobby they augment that basic information if necessary with detailed information about activity content and schedule. At the Information Desk they can request clarifying information about specific interests not reflected in other information media. Ticket Area media will confirm that visitors have made proper choices of experience options or give them opportunity for final change of choice before they arrive at the ticket counter.

Parking Lot - Arrival

Orientation in the parking lot will continue way-finding directions that began outside the park to assure a seamless way-finding experience. A

symbol or icon representing the visitor center attached to signs that guide people to the center will prepare them to easily identify the visitor center structure upon arrival at the parking lot.

Architectural elements, site planning and landscape design contributes to arrival experience by focusing visitor attention toward the center. Information media will clearly orient them toward an arrival plaza for introductory information about what they should do next.

A well-placed identification sign will reinforce the visitor center as the primary destination.

Visitors can easily find the visitor center from alternative parking locations, such as the hotel parking lot. Since the visitor center building is not visible from alternative parking locations, signs and landscape design will guide visitors to the visitor center.

Plaza

Media, landscape, and architectural elements in the plaza will convey Welcome! Orientation will provide information to visitors arriving when the visitor center is closed and will initiate the decision making process for all visitors as they enter the visitor center complex. An outdoor media kiosk with wayside exhibits, possibly augmented with audiovisual components, will provide basic self-service orientation. The media will initiate the decision making process by introducing three cave tour experience options available to visitors, describe tours, and identify schedule of available tours.

A central pavilion with a four-panel upright exhibit displaying visuals and text will provide the initial orientation and tour information described above. One panel will include a "mall style" map of the visitor center area indicating the location of various components with emphasis on the lobby and ticket sales areas. Three other panels will introduce tiered experience options with emphasis on a recommended introductory experience. Photographs accurately reflecting people participating in experience opportunities will illustrate each experience option. Concise text will provide basic descriptions that help visitors decide which option best fits their interest and ability. All descriptions will outline a full park experience, not just a cave experience. A three-monitor electronic information system using the same three-tier system of grouping tours into sets will coordinate with this set of three exhibit panels.

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Design of the three exhibit panels presenting experience options will allow easy change to adapt to seasonal operations or visitor numbers. A set of digital production files maintained by the park can be quickly changed for output as digital prints. Harpers Ferry Center can help park personnel find a source convenient to the park for printing these “temporary” panels.

Within the plaza a wayside exhibit will identify Mammoth Cave National Park as a Center for Environmental Innovation and the visitor center as a LEED (Leadership in Energy and Environmental Design) certified building. Visitors will be invited to find placards within the visitor center that highlight environmentally sensitive structural elements.

Clear identification of the building as a visitor center and as a National Park Service facility will attract visitor attention. Directional and informational signs and intuitive design will identify and orient visitors to functional areas.

The plaza will function as a visually and climatically attractive area that contributes to a calming experience. Good lighting and comfortable seating will accommodate mobility impaired visitors and those wanting a casual experience.

Entry Lobby / Breezeway

A climate controlled and securable entry lobby will provide a satisfactory comfort level for visitors. Access by staff will be easy, including access by employees with mobility impairments. Storage space for information supplies will provide adequate supplies for at least one day of visitor service.

Media in the entry lobby will present information in a hierarchy appropriate for a variety of audiences. All four panels installed in the plaza pavilion will repeat in the lobby. Information related to travel, accessibility, backcountry use, tour options, and park features will be offered in a variety of media formats, including computer monitors and an information desk with personal services.

Media in the entry lobby will reflect the theme “How do I see Mammoth Cave?” Information and trip planning exhibits will add to informational panels associated with tours and ticket sales. A large map will show roads, trails, personal service activities, cultural and recreational destinations, geographic interpretive areas, and cave

entrances. Media might include interactive computer terminals and a monitor presenting webcam views of the park. A visitor activated touch screen information source can provide detailed backcountry use information, including images of specific campsites. Visitors can obtain a park folder and park newspaper described in **PARK-WIDE RECOMMENDATIONS** section of this long-range interpretive plan to supplement other media.

Experience opportunities outside the park can be presented by exhibit panel, brochure, and personal services at the partnership area inside the exhibit area lobby.

Way-finding signs located overhead so they are not overwhelmed by large numbers of people and sized for easy reading by most visitors will clearly identify major functional areas accessed from the entry lobby.

An Information Desk will offer orientation and trip planning information that is not available at other media in the plaza and entry lobby. The desk will be visible as visitors enter the lobby and located if possible so visitors pass the desk in route to the ticket sales area. Media at the desk will include a bulletin board to provide current information, personal services, and monitors displaying tour availability.

Promenade and Ticket Sales Area

Information in this area will focus on one thing - tickets appropriate to guests - rather than other park features. Information media for viewing as visitors wait in line to purchase tickets will present scenes and descriptions of tours to reinforce decision-making. Audiovisual monitors and exhibit panels will supplement media in other parts of the visitor center to increase visitor knowledge of tour characteristics and availability. This area can also present "warning" safety information usually given to visitors at the cave entrance to assist final decision-making while in line.

Exit signs in the ticket sales area will direct visitors from the ticket area to tour staging areas, museum, short trails near visitor center, and the hotel food service.

INTERPRETATION - EXHIBITS

Lobby

This lobby area will function as an interpretive corridor. It will move visitors from informational experiences in the entry lobby to educational experiences in the museum exhibit area and sales area. Appropriately named functional areas linked to the lobby need to be visible and attractive with signage and architectural design that easily identifies each. Dramatic lighting can enhance visitor experience and attract visitors to functional areas. For example, a darker entry to the lobby and dramatic lighting in exhibit and sales entrances will attract people into those areas. Overall, the area will project an open, uncrowded, calming feel. Media will present partly informational and partly educational/interpretive materials that create anticipation and establish moods for learning.

A partner area outside the museum exhibit space will define and contain presentations and media of partners occupying space in the visitor center. Miss Green River and Caveland Marketing organizations will have designated space if they choose to partner with the park in the visitor center. Integrated operations will provide visitors information they need to experience the Caveland Region or Biosphere Reserve. Design of desk, signs, and media will compliment other interior design of the visitor center.

Exhibit Area

The exhibit area can provide a focused interpretive experience that communicates an overview of primary interpretive themes to stakeholders. Other interpretive activities such as personal services in the cave and on the surface will reinforce and build on the introductory interpretation of themes provided in the museum exhibits. The exhibits can provide a contrast to the time-sensitive decision-making often required for the cave tours. Exhibit design can continue decompression initiated in the exhibit area lobby to prepare visitors for a focused interpretive environment.

Multi-tiered exhibits will allow all visitors to grasp a main message, the primary theme established for Mammoth Cave. Some visitors will have a limited amount of time to spend in the exhibit area and may only acquire this single message. Others with more time in the exhibits will have opportunity to understand all park themes established in this long range interpretive plan.

Exhibit area interpretation will provide a basis for interpretation provided throughout the park. The exhibits can provide context for Mammoth Cave in relation to other caves and help visitors appreciate Mammoth Cave geology, life forms, and exploration history. In contrast to cave tours that primarily rely on a storytelling approach to interpretive messages, the exhibits can visually illustrate interpret themes through a variety of media. Exhibits can provide a sense of scale (geologic time and cave size) with multimedia components that are touchable, interactive, and understandable. The exhibit area can relate stories not effectively told elsewhere. For example, exhibits can visually represent sites that visitors do not see such as cave life forms that avoid visitor use areas. Exhibit designers will carefully select subjects for their interest to visitors. Topics that illustrate multiple themes and that are specific to Mammoth Cave National Park (diversity of animals and people associated with Mammoth Cave) can appeal to many stakeholder categories.

Since 90% of visitors will participate in one type of in-cave experience or another, it is not necessary to recreate the cave environment in the exhibit area. However, the design of exhibits and the treatment of the display area can “suggest” the cave environment by using patterns and textures found in the cave, i.e. horizontal stratification, vertical fluting, scalloping, etc.

A model of Mammoth Cave and its associated karst landscape will create a focal point of the exhibit space. This model will depict the vast network of known cave passages in relation to surface features. The purpose of the model is to help people visualize a three-dimensional resource. It can also link the above and below-ground worlds and the relationship of the cave with the Green River and the sinkhole plain. The model might be used to illustrate cave tour areas, perhaps with a different color, in relation to the total known cave. This will allow visitors to compare the length of tour they attended to the total cave length to gain appreciation for the enormity of Mammoth Cave. The exhibit can effectively illustrate cave levels, dimensions, and complexity to create a sense of “Wow” when thinking about Mammoth Cave.

Exhibits must also be designed for younger age interaction. A considerable number of visitors waiting for cave tours are young people. The exhibits must have child-friendly elements that will attract young people and hold their attention.

Future Program Description

An exploration exhibit can interpret cultural history of cave exploration and research. This exhibit will attract anyone interested in the human experience of exploration and learning. It will encourage exploration of other mysteries. An unfinished exhibit will illustrate the unfinished mystery of caves. A survey map of known passages with writeable surface may allow penciling in additional passages as they are explored.

Another exhibit might display objects and illustrations related to the long Human History of the area. It can depict American Indians, miners, settlers and their descendents (including today's residents in the karst region), earlier tourists and guides, Civilian Conservation Corps enrollees, and explorers. Audio messages might carry short excerpts from oral history interviews with people in some of these categories or scripted narration to reinforce visual elements of the exhibit.

A set of exhibits on the natural history of the Mammoth Cave region will both describe the geologic processes that have shaped the landscape and the biological communities found on the surface and in the cave.

A Karst Ecosystem exhibit might visually communicate through high quality photographs various park habitats (surface and subsurface) and associated life-forms. A component of the exhibit can depict cave habitats and their inhabitants. Images can include cave crickets, eyeless fish, and other animals including endangered species.

The preceding exhibit ideas describe some concepts that need to be illustrated in the exhibit area. Specific exhibit descriptions, exhibit room layout and selection of media, artifacts, objects, and detailed content will be accomplished during exhibit design concept planning. An exhibit designer will help develop techniques to present in a detailed museum exhibit plan. The exhibit plan will specify sufficient circulation space to accommodate heavy visitor load and reduce the impression of crowding. Some exhibit elements will require considerable space, such as alcoves to prevent sound spill from audiovisual components. The exhibit planning and design process will dictate specific exhibit content and the actual amount of space needed for exhibits.

The exhibit plan will also address the following issues not yet fully resolved.

- How to inform exhibit visitors of tour departures. An audio announcement system will severely limit the ability to provide a focused interpretive and educational environment. The plan will evaluate and recommend appropriate media options for announcements.
- A decision about how multi-purpose the exhibit area needs to be must be made before designing the space. Typically the more functions a space is required to manage, the less effective it is for any specific function. This paradigm is especially true for audio-visual and exhibit spaces.
- The exhibit area will have areas for visitors to sit, especially those who spend an extended time in the exhibits. However visitors who are simply waiting for tours to leave will be encouraged to use exterior seating areas.
- Successful temporary, changeable exhibits require commitment of staff time and annual funding. An informed decision will need to be made about including such space before designing the exhibit area.
- Should exhibits show cave areas that are not open to the public?

Simple mock-ups of proposed exhibits installed in the area currently used for ticket sales can provide opportunity to conduct formative evaluations of exhibit ideas before committing to full production.

INTERPRETATION - AUDIOVISUAL

Exhibit / Audiovisual Integration

Integrating audiovisual elements into sections of the exhibit area can assist the park in providing layers of information to visitors. Presenting information in different formats also helps accommodate different learning styles. In some situations, an audiovisual element might be the best way to illustrate particular concepts. For example, park staff and audiovisual planner/producer might consider incorporating animation produced for the "Water over Stone" digital video as an element of an exhibit focusing on geology. The producers of that piece did a good job illustrating geological processes. Potential to use this animation

Future Program Description

must be evaluated during exhibit design to assess how well it has held up over time in terms of content and appearance quality.

Audiovisual media can support cultural elements of the exhibits. For example, exhibits might include edited sections of oral histories. Review of oral history recordings during exhibit planning will assess their quality and usability in exhibits. Exhibit design might also offer interactive components requiring visitors to pick up a sound stick, press a button, or lift an item to activate a sound bite.

Dedicated Audiovisual Space

The concept of a small audiovisual space in the exhibit area with seats for 10 - 15 people can work. A dedicated, separate theater space in the visitor center can create options for more effective use of audiovisual media and for presentation of special programs. Park managers will base the decision between options upon how many people they think might flow through this space at one time with interest in sitting down to watch a short video. Similar design of exhibit and audiovisual spaces will assure supportive integration of both areas.

Design and production of audiovisual space and media will address ADA accessibility issues including appropriate closed captions, audio description, and audio assists.

Video

A video for Mammoth Cave National Park can give viewers a more experiential sense of going into the cave, especially for those visitors who are not able to take a cave tour.

Audiovisual Elements - Entry Lobby

The current interactive computer program available to visitors in the visitor center lobby needs further development. The original purpose of this program was to provide people a sense of the level of difficulty, length, walking surfaces, heights, and tight places they will encounter on tours. A short description of each tour (what will be seen and what is the focus of the tour) might make the program more effective and attractive. Before updating or further developing this program an evaluation through focus groups or surveys can determine the current effectiveness of the program as well as improvement in information visitors might find useful. Development of this interactive media will

consider ADA requirements. Specifically, written text will be narrated when feasible and a separate audio track can add an optional element.

Information Monitors

Regardless of changes implemented at the visitor center, a monitor system will remain one of the important ways visitors access this information. Information monitors will occupy prominent locations in the entry lobby, ticket area, and plaza.

Computer monitors are recommended for this application if available budget will fund the expense. Because the monitors are one of the most relied upon tools for tour information, the program used to generate this information will be upgraded. The information presented needs to be precise for ease of viewing and information processing. Upgrade will include a new program and redesigned screens to present information in a clear, consistent manner in terms of colors and fonts.

Because the park has no control over the tour reservation system an automatic updateable monitor program linked to the system might not be feasible. Other methods for easily updating information will be considered in the development of a new monitor program. Program controls must assure that information presented is easily updateable and that visual consistency remains intact.

Other Audiovisual Media

Web cams or monitor equipment readout can provide real time views and data of selected resources and activities. Park staff will develop a funding proposal to use web cams and other real-time sensing devices to deliver live feeds from different park sites to interpret management projects and interpretive activities to schools and the public, i.e. air quality and flow, river level and flow rate, cave temperature.

INTERIM PROPOSALS

The following recommendations will improve visitor services in the existing visitor center until completion of programmed reconstruction.

The existing monitor system in the Ticket Room will continue to provide information. Some immediate improvements can make information from this system easier to understand. Simplification of the display graphics will make it easier for visitors to understand the

Future Program Description

information presented. Improving the existing graphics parameters such as background color, text colors, type fonts, and type sizes can accomplish this improvement.

A three tier monitor system consistent with the three tier cave tour system and three tour information exhibit panels will help simplify the decision making process by presenting options in useful sets. Presenting these sets from left to right on the monitors and the exhibit panels will help visitors find the information most useful to them in the quickest time.

When funding becomes available the three information panels describing tour options proposed for the plaza pavilion will supplement information provided by monitors in the Ticket Room. The Lobby will contain these same three panels to assist information desk personnel, and the Breezeway areas will contain the mall-style orientation panel from the same plaza pavilion.

SALES AREA

The new visitor center will include a larger sales display area. It will have a sales counter with cash register and some storage for stock. Publications, maps, posters, videotapes/CD-ROMS/DVDs, and other items will be displayed in sufficient space to encourage browsing.

STAGING AREA

The new visitor center site plan proposes a tour departure staging area. The area will include at least two sheltered staging structures - one for bus tours and one for Historic Entrance tours. Drawing people to this area will also disperse use from other areas to reduce the feel of overcrowding throughout the visitor center complex. The area will include open space to reflect a sense of relief and anticipation. Seating and landscape elements will contribute to effective interpretation and enjoyment. Wayside exhibits at each shelter will reinforce safety and resource protection responsibilities of visitors. The design plan should include elements at the staging area that will clearly designate which staging area will serve which tour so visitors can easily, without confusion and stress, locate the appropriate waiting area for the tour they have selected. Landscape design and signs at entry lobby and ticket area will help visitors find their way to the staging area.

DEVELOPED AREA

Resource Description

Many visitors linger in the area near the historic entrance to Mammoth Cave. The area includes a visitor center for the national park and the only natural entrance to Mammoth Cave used by visitors. Facilities supporting visitor activities include parking lots that frequently fill during the busy season, a 110 site campground, picnic area, outdoor amphitheater, and extensive hiking trail system. Locomotive Engine #4 and coach listed on the National Register of Historic Places and Old Guide's Cemetery link today's visitors to historic visitors. The developed area includes concession operated lodging facilities ranging from rustic cottages to motel and modern hotel. The concession also provides food service, souvenir sales, camp store, self service laundry, showers, gasoline, and bus transportation to outlying cave entrances.

Visitor Experience Statement

Implementation of proposals in this plan will improve developed area visitor experience. Visitors will have easy access to most facilities. Orientation and directions will provide easy, clear way-finding to all points of interest. Visitors can easily identify the range of options for experiences including cave tours, exhibits, hotel services, and things to see and do in surface interpretive areas. Interpretation, education, and recreation opportunities offer a full menu of options to meet the needs of most visitors. Basic visitor needs for food and restrooms are readily available. Guest services at the concession-operated hotel reflect close cooperation between the National Park Service and concessionaire. Visitor experience is improved by integration of both entities.

Recommendations

WAYSIDE EXHIBITS

Recent upgrade to wayside exhibits in the developed area presents visitors good access to this media. Routine evaluation of waysides will determine need for additional exhibits or revision to existing ones. New exhibits will be required following visitor center reconstruction. These additions will effectively integrate thematic stories of museum exhibits and surface and cave resources in the developed area. The routine assessment will use themes established in this plan as criteria for determining appropriateness of messages delivered by wayside

Future Program Description

media. The evaluation will also assess site design at each wayside and recommend improvement for access and esthetics.

AMPHITHEATER

Interpretive managers will improve media capabilities at the park amphitheater as soon as possible. Ranger programs currently delivered as slide shows will convert to computer-based presentations created in PowerPoint, Macromedia Flash, or another technology that may become available over the next few years.

TRAILS

Wayside exhibits with system-wide maps and information will identify the complex trail system in the developed area. Positioned at central, heavily used locations, they assure all visitors opportunity to learn about walking experiences. Central trail wayside exhibits in the developed area will occupy prominent positions in areas where visitors congregate at the campground, visitor center, and hotel. The exhibits will present minimum impact techniques and resource management issues to help visitors reduce adverse impacts and increase their knowledge about trail safety.

Site-specific exhibits at each trailhead will identify trail route, length, difficulty, estimated time, safety considerations and graphics of natural or cultural features along the trail.

MAMMOTH CAVE RAILROAD, BIKE, AND HIKE TRAIL

A nine-mile bike and hike trail is planned to connect the developed area with Park City via the historic grade of the Mammoth Cave Railroad. Visitor access points will be at the Mammoth Cave Hotel, Sloans Crossing Pond, Chaumont, and Park City. Information kiosks will be developed for the Park City, Chaumont, and Hotel terminuses. These kiosks will provide a map of the bikeway, a panel interpreting the history of the railroad, and a bulletin case for posting seasonal program and safety information. Wayside exhibits will be developed for cultural and natural history features along the route.

CONCESSIONS

Resource Description

Concessionaire operated lodging facilities range from rustic cottages to motel and modern hotel rooms. Mammoth Cave Hotel supplements lodging with convenience services including a restaurant, coffee shop, gift shop, craft shop, kennel and accessible meeting rooms. A concession service center offers gasoline, camp store, showers, self-service laundry, and bus service to transport visitors to cave entrances that are outside the developed interpretive area.

Another concessionaire operates a motorized sightseeing boat tour on Green River.

Concessions serve large numbers of visitors and are in a position to provide equally large interpretive benefits to those visitors. Currently, visitors who park in the concession parking lot at Mammoth Cave Hotel to walk to the visitor center experience difficulty finding their way. A complicated route between the two points involves many turns through the concession facility without visual identity of the visitor center destination. The need for orientation at the hotel equals the need at the visitor center plaza.

Visitor Experience Statement

Concessions will remain important partners with the National Park Service to assist with personal and other interpretive services for the visiting public. Miss Green River, the sightseeing boat operated on Green River between Mammoth Cave Ferry and Turnhole Bend, will provide an introduction to the outstanding scenery, the floodplain and bluff forests, and the wildlife of the river valley. Mammoth Cave Hotel and related concession services provide visitors easy access to basic services – food, gasoline, convenience items.

Recommendations

Concession operations provide interpretive services and some media to visitors. National Park Service staff will seek concession manager cooperation to explore opportunities to enhance services.

Interpretation on the boat will consist of personal services, possibly an audio played by boat operators, and publications. Interpretive content will include shoreline feature identification, wildlife likely to be

Future Program Description

encountered, and freshwater ecology including under water features. An interpretive site bulletin may be prepared for distribution with tickets.

Park interpretive managers will help train concession employees who routinely interact with park visitors. Concession managers will participate on interpretive and educational planning teams to help the park serve visitors better. The park will provide training and up-to-date information for the employees of the boat tour, bus drivers, and other partners who provide visitor services in the park.

A duplicate of the four panel orientation and tour information exhibit proposed for the visitor center plaza could occupy a prominent location at Mammoth Cave Hotel.

The park will explore with hotel concession managers the possibility of developing a convenient, direct route to the park visitor center from the hotel parking lot.

Park staff will encourage and assist the concessions with development of items to improve visitor experience in rooms, lobbies, and eating facilities. For example, the hotel lodging and eating facilities can offer simple interpretive messages and visitor orientation material. The hotel can continue to use place mats for food service areas to illustrate resources and stories of the site and the karst region. Photographs can be displayed as framed prints in guest rooms to reflect characteristic scenes of cave and surface features to represent a balance between cave and surface. In-room pamphlets can depict history of the park, point out defining surface and cave features, and emphasize evolving historic uses and activities at Mammoth Cave National Park and the hotel concession's role in those activities.

National Park Service and concession staff will explore development of a short video for continuous presentation in lobbies or other public locations frequented by visitors. The video can depict development and evolving use of Mammoth Cave National Park and historic accommodations as a world renowned visitor attraction. The video might use low volume sound or scrolling text to supplement the projected images to tell this important part of Mammoth Cave's story.

The current concessionaire has expressed interest in developing exhibits for the lobby and dining areas on the commercial history of the Mammoth Cave Hotel. Interpretive management will actively

work with the hotel management to plan these exhibits in conjunction with the visitor center exhibit space.

CAVES

Resource Description

Mammoth Cave National Park contains the longest surveyed cave system in the world. More than 350 miles of linked cave passages have been mapped under Mammoth Cave Ridge, Joppa Ridge, and Flint Ridge. Most of the park's cave passages are dry because of sandstone and shale cap rock that acts as a roof over underlying limestone. The deepest passages, at and below the water table for this area, are flooded.

Fauna in the caves comprise approximately 200 species. Some species spend their entire life in the cave and others seek cave shelter but venture outside. This diversity makes Mammoth Cave one of the most diverse cave ecosystems in the world.

Historical records indicate discovery of Mammoth Cave before 1798. However, cave explorers after 1798 found evidence that Pre-Columbian Indians went into the cave to chip gypsum and mirabilite off the cave walls and ceilings. Their purpose for doing so presents one of the many mysteries of the cave. Nitrate leached from cave soils and shipped to gunpowder factories in the early 1800s brought fame to Mammoth Cave. Visitors began touring the cave in 1816.

Only a small percentage of cave passages are open to public tours (approximately 3%). Park Guides conduct trips in electrically-lighted portions of the cave and in passages lighted by hand-carried lanterns. Tours use the Historic Entrance and several constructed entrances to reach different areas of the cave.

The number of tours offered and types of tours has varied from year to year. It is difficult to identify precise trends, but there are a number of general statements that can be made:

- Cave visitation has declined 33% since 1992.
- The total number of tours has remained relatively constant, but there is a tendency toward an increase in the shorter Travertine and Guided Discovery Tours in the past five years.

Future Program Description

- Visitor satisfaction with services provided has remained high as documented in the annual visitor satisfaction survey.
- The average number of visitors per tour has declined, both by virtue of reduced visitation and lowered tour limits.

Maintaining a trained local guide force that can respond on short-term notice of peak visitor demand is a challenge for cave operations supervisors.

Park interpretive managers must attempt to adapt to changing visitation patterns. Mammoth Cave is not a destination for many people, so the park receives many impulse visits rather than visits scheduled in advance. Easter/Spring break is much more variable. Depending on Easter's date, school spring breaks, weather, and school testing schedules, heavy visitation may be experienced for a period of two to five weeks. These trends increase difficulty of scheduling. Improvements in and surrounding the national park likely will initiate a trend of increasing visitation.

Visitor Experience Statement

All visitors who want to go into the cave will have opportunity to see at least a small section of cave passage. A variety of activities creates opportunities to meet the needs of all visitors regardless of their previous experience in caves. Information programs will identify to all visitors the available levels of cave activities including tours of different complexity, difficulty, and interest. People can travel to the Historic Entrance at any time; the following options will provide more extended cave experiences.

- Basic level – a trip to the Historic Entrance and participation in introductory cave experiences.
- Second level – the general tour experience of 1-2 hour guided tours to various sections of the cave system.
- Third level - more extensive involvement with interpretive themes and park resources provided by specialty tours.

Interpretive activities provide opportunities to create a sense of immersion, a taste of the cave, a sense of cave values. Interpretation

will clearly communicate to visitors the interdependence of the cave and the rest of the karst ecosystem.

Cave interpretation will encourage and facilitate excitement and fulfill visitor curiosity. Visitors will encounter personalized – from interpreter perspective – thematic tours that adhere to cave tour evaluation criteria established in this long range interpretive plan. All visitors participating in cave tours are aware that they are involved in a unique experience available nowhere else on Earth.

Recommendations

This long-range interpretive plan recommends implementation of the Cave Tour Operations Business Plan (see Mammoth Cave National Park Comprehensive Interpretive Plan) as soon as possible. Primary among these actions put forward in the business plan are:

- Consider additional marketing opportunities and partnerships to increase visitor use at Mammoth Cave, particularly during the winter season.
- Establish a formal process to monitor the visitor waiting periods for the next available tour.
- Improve mechanisms for having trained guides available for intermittent employment in order to add tours on short notice during peak visitation periods.
- Empowerment of office staff to add tours and incur personnel cost to meet unmet demands.
- Use fee program funding to add additional tours in the summer peak demand period between 10 a.m. and 3 p.m.
- Redistribute supervision of permanent full-time and permanent less-than-full staff to 025 GS 9 Park Ranger (1) staff
- Fill vacant 025 GS 9 Park Ranger (1) staff as soon as possible.
- Allow for a single Shift Office Supervisor position without temporary employee supervision responsibilities.

TOUR OPTIONS

A variety of tours offer opportunities to disperse visitors and help them understand the complexity and size of the Mammoth Cave system. Interpretive managers will develop a hierarchy of cave tours consisting of three levels. A system of tiered tour offerings will simplify the tour selection process by breaking tour options into useful sets. These options will match the amount of time visitors have available and the visitor level of interest and experience in caves. The tour hierarchy will include categories of Introductory, General, and Specialty tours.

Introductory Tours

Park interpretive managers will establish a basic, introductory cave tour option targeted to people with limited time or cave experience. Introductory cave tours interpreted by attended stations assure everyone visiting Mammoth Cave National Park access to a cave. It provides visitors freedom to visit the cave at their own pace. The attended station format of the introductory tours during high visitation may change to a short guided experience when visitation levels do not require stationed interpretation. The attended station option will be clearly identified as an introductory, first time experience but not an inferior tour substituted for better quality, guided tours.

The introductory option will offer two tours into different sections of Mammoth Cave so tour participants do not feel they are deprived of a well-balanced cave experience. The Travertine Area of Frozen Niagara and Broadway or Audubon Passage of Historic Entrance will combine with the visitor center as the fundamental introductory visitor experience.

The park interpretive program will retain the discovery tour concept at the Historic Entrance as one component of the introductory option. The attended station tour previously operated in that area will lengthen to increase its value to visitors. For example, the tour may extend along Broadway Passage to the Tuberculosis Huts to make it more attractive to more people. A sticker or some creative method may identify people on the Historic Tour to differentiate them from introductory tour participants in the historic area of the cave.

Interpretive managers will explore the feasibility of adding the discovery concept of interpretation to the Travertine Area. Two-way traffic in that area will require careful scheduling to maintain efficient traffic interaction with other tours using that area of the cave.

The basic experience must be reasonably available to all visitors. The feasibility of making entrances and passages accessible to mobility impaired visitors will be evaluated. The feasibility study can consider other alternatives to transport people to the Historic Entrance and down the steps into the cave. Future general management planning or special study will also explore access alternatives for the Frozen Niagara or other section of the cave that can provide a complementary experience to the Broadway Passage attended station. An elevator or new entrance providing another door into the cave can create a desirable accessibility amenity. It would also improve functionality of cave tours and provide another emergency ingress/egress to the cave.

General Tours

These guided tours accommodate substantial numbers of people but will remain limited to specified tour size. Size limitations often dictate advanced planning to assure ticketed space on a specific tour. The general category will include tours of moderate length and difficulty lasting one to two hours. General tours will serve the following purposes.

- Provide participants more exposure to park stories.
- Provide interested visitors opportunities to see more cave.
- Offer opportunities for more interaction with park rangers.
- Enhance opportunities for thematic interpretation.
- Present greater depth of information concerning park resources and stories.

The general tour program will continue current operations. Few minor changes may be necessary to accommodate expansion of introductory tour program during the busy visitation. General guided tours will include the Historic Tour and Frozen Niagara Tour.

Future Program Description

Specialty Tours

The specialty tour option intended for smaller groups with special targeted interests will serve the following purpose.

- Provide the greatest opportunity for thematic interpretation of specific themes.
- Provide opportunity for participation in interpretation focused on specific topics.
- Learn park themes and stories to a greater depth than available in other tour options.

The current specialty tour program will continue, but several changes will adapt the program to trends in visitor interest and park need to emphasize specific topics. Still, specialty tours need to remain in balance with the introductory tour program. The basic specialty tour program will include Grand Avenue Tour, Wild Cave Tour, and Introduction to Caving, Trog Tour, Making of Mammoth, Great Onyx Tours, Violet City Lantern Tour, and Star Chamber Tour.

The following changes and additions will augment the specialty tour program in response to visitor demand and park staffing capabilities.

Cave tours defined by topical themes (archeology, geology, ecology) rather than location will also be evaluated as additional specialty tours and their potential impact to increase repeat visitors.

Additional opportunity for specialty tours will be evaluated. There is a significant demand for wild cave tours and the possibility of offering additional routes in other sections of the cave will be reviewed for feasibility, safety, and resource impact.

The capacity of the popular Lantern Tour will reduce below its current limit of 60 people. Interpretive managers will evaluate the tour in terms of visitor safety and interpretive intent. The current 60 person size is thought to exceed the safe limit for a tour conducted with hand-held lanterns in a cave environment. Interpretive intent of the tour will more effectively be achieved with a smaller group that more accurately reflects the historic tour experience the tour attempts to simulate.

A Flint Ridge tour by bus, van, or automobile will include cave and surface interpretation. The tour will interpret karst landscape features, vegetation types, and historic resources reflecting natural and cultural themes that effectively link human activity and the cave region. A Great Onyx Cave tour connecting surface and cave stories will climax this special experience.

CAVE FACILITIES AND MEDIA

Improved lighting and high quality cave trails contribute to visitor enjoyment and understanding. Planned improvements will create future opportunities and concerns for adapting cave interpretation, including various types of media that will be dealt with in future plans.

Conservative application of the wayside exhibit medium within the cave will enhance interpretation. Waysides can effectively interpret without unacceptable distractions in areas where visitors are free to walk on their own. At the present time this is in the area used by the Discovery Tour. The existing waysides in this area seem to work well with a self-contained lighting source for each panel. Other areas to be considered include the snowball room and the Frozen Niagara area.

Audio interpretation in the cave is not considered appropriate at this time. Audio media may be considered when self-guided, attended station interpretation is implemented on longer tours, such as the proposed expansion of the Discovery Tour.

CAVE TOUR EVALUATION

Park managers will expand activities that determine visitor expectations, wants, and needs. Staff can conduct focus groups to determine basic visitor profiles. Topics needing immediate assessment include comparison of attended station and guided tour presentation formats. This plan Implementation Plan lists several other evaluation techniques appropriate for Mammoth Cave staff implementation. Western Kentucky University and the Learning Center might also secure evaluation reports for the park.

Park management needs to evaluate the cave tour program and tour size limits. It is generally accepted that the general tour size of 120 is too large and a reduction is warranted. Reductions in tour size must, however, be balanced with the need to maintain enough overall daily tour capacity to meet visitor demand. An effective cave tour evaluation program will use the following suggested criteria.

Future Program Description

- People have reasonable availability of cave tour experiences.
- Size of group was acceptable.
- Increase in revenue above costs.
- Resource protection and visitor safety is maintained or enhanced.
- Program costs and effectiveness are in an acceptable range.
- Activities are available at times that meet needs of visitors.

PACKAGES

Park staff will facilitate development of tour packages combining cave tours and surface activities. Development of effective packages will involve park staff and selected partners who can provide services appropriate for each package. The long range interpretive planning team proposes two types of packages. National park packages will involve activities within Mammoth Cave National Park. A karst region package will combine national park activities and partner activities that are outside the park but related to national park themes.

Three national park packages can mirror the three-tiered experience options – introductory, general, specialty - described previously for cave and surface activities. Partnerships with park concessionaires can add lodging, meals, and Green River boat rides to the package.

A karst region package will offer visitors a more expansive exploration of Kentucky's cave country. Partnership between the National Park Service and several visitor service providers outside the park can show elements of the karst ecosystem that the park does not offer. Multi-marketing, multiple ticket partnerships with such entities as national park concessionaires, cave operation of the Kentucky Cave Association and the Cave lands Heritage Center will provide enhanced visitor experiences.

RIVER CORRIDORS

Resource Description

Green River, one of the most biologically diverse rivers in North America, bisects the park. In the North Side interpretive area a six mile section of Nolin River flows from the north to enter Green River. Nolin River valley includes First Creek Lake on the floodplain and red sandstone conglomerate cliffs notable for their height and vegetation cover.

Both of these rivers meander through steep sided river banks bordered by alluvial floodplains in valleys sometimes bordered by 105-300 foot bluffs. In some places limestone outcroppings and sandstone create cliffs with mysterious cave entrances. Water enters Green River from several springs that drain the caves along both banks of the river and from a few feeder streams on the north bank. Dense forests, canebrakes, wildflowers, and many forested islands enhance outstanding scenery. Mammals and birds are common and over 100 species of fish include several game fish popular with fishermen. Boat and canoe launch ramps and primitive to moderately developed campsites and picnic sites encourage visitors to enjoy the rivers.

One of the most scenic portions of Green River with great geologic and historic interest is Turnhole Bend. Visitors can reach Turnhole Bend from Green River or a trailhead on Brownsville Road. This interesting feature received its name because packet boats used to turn around in the discharge pool of a large spring.

A dam and navigation lock on Green River outside the park restricts flow of the six mile section of Nolin River and fifteen miles of Green River inside the park. Nine miles of Green River from Floating Mill Island to the east boundary is free-flowing.

The number of people using outfitters on the river has increased over the past several years. These operations have the potential to significantly affect the experience of visitors in the river corridors.

Visitor Experience Statement

River corridors in the national park provide some of the best views of natural resources. The quiet, isolated river corridors provide visitors opportunity for solitude and close contact and enjoyment of a variety of wildlife. Over 30 miles of river in the park offer a wealth of

Future Program Description

recreational opportunities. River corridor visitors can participate in boating, fishing, primitive camping, and sightseeing. Bank and boat fishermen extensively use Green River and Nolin River. Boaters can launch at Dennison Ferry, Mammoth Cave Ferry, or Houchins Ferry.

Recommendations

The National Park Service will promote uses and behaviors that ensure quality experiences for all visitors and that maintain and protect river corridor resources.

A variety of information and interpretation media will be provided at all access points. Bulletin boards will provide current safety and resource information. River trail trailheads at each developed put-in location will include an upright wayside exhibit with a map of nearby sections of the river. A small inset map identifying the entire river corridor with a "You Are Here" indicator will help visitors understand the physical and interpretive connections between all points. A standard low profile wayside exhibit will interpret resources encountered within the corridor and connect those resources to primary themes.

Visitor can cruise on "Miss Green River" to look for wildlife, springs, and river bluffs with cave entrances. Interpretation will include introduction to interpretive stories at the ticket sales area in the park visitor center and an interpretive/information panel at the boat docking facility on Green River. A variety of media presented on the boat will include personal services and publications. Interpretive content will feature shoreline identification, wildlife likely to be seen, and freshwater ecology, including under water features and fauna.

Cooperation between park staff and canoe outfitters can include training in interpretation techniques and sharing information about resources, regulations, and stewardship. Partnership activities may include developing a site bulletin that meets the needs of park and outfitter users.

ROAD CORRIDORS

Resource Description

A variety of road characters from wide, smooth parkways to narrow, winding, uneven surfaces offer distinct experiences. National Park Service operated ferries link roads north and south of Green River. Many visitors are not aware of experiences available from roads. They do not participate in driving opportunities to understand the diversity of surface resources.

Visitor Experience Statement

Park roads provide easy access to resources and visitor use sites such as overlooks, trailheads, cave tours, and convenience facilities. Passive recreational motorists can enjoy pleasant windshield tours to learn about park cultural and natural resource values. Visitors are encouraged to enjoy the variety of road characters. A variety of media provides information needed to understand resources surrounding roads. Two ferries continue to provide attraction on road corridors.

Recommendations

Information media will describe four types of park road experiences to visitors: Parkway, Park, Rural, and Backcountry. Roads types are based on road design, allowable speeds, levels of access, and scenic character. Parkway roads include Chaumont to the Visitor Center Complex. Park roads are roads between Sloan's Crossing Pond and the West Entrance, Cave City Road between Sand Cave and the Carmichael intersection, and Green River Ferry Road. Roads with rural character include Flint Ridge Road, Houchins Ferry Road, and Park Ridge Road. Backcountry roads are Ugly Creek Road and Dennison Ferry Road.

New pullouts may be developed where desirable and feasible to interpret significant resources. Thematic wayside exhibits at pullouts will help visitors understand and appreciate park values.

Interpretation along rural roads will be accomplished by less visible and intrusive media such as tour booklets or audio guide.

Motor tour guides will interpret Ugly Creek Road, Houchins Ferry Road, and Flint Ridge Road. The cooperating association can sell road guides at the interpretive sales area in the visitor center. Audio tours with optional tour books will meet requirements of many visitors.

Future Program Description

Other tour guide technologies (CD, DVD, CD-ROM, and pocket PCs) can create souvenir items with multiple tracks that provide surrogate natural and cultural experiences. Planners will keep existing media such as waysides in mind so new products complement and build upon existing resources.

Mammoth Cave Ferry parking lot information media will inform visitors about experience opportunities in the North Side. Signs and upright wayside exhibit at a pullout on Green River Ferry Road north of the river and within sight of the ferry will invite farther travel. Media will let people who frequently turn around after crossing the river understand North Side attractions. Information will encourage motorists by providing distances to destinations such as Good Springs Church and Ugly Creek motor trail.

Park managers will continue to expand the current bicycle trail in the developed area. The completed bicycle route will link the park visitor center and developed area to Park City, much of it within road corridors. Parking pullouts along roads near the bicycle trail will provide access for varied lengths of biking experience. Suggested access points include Park City, Diamond Caverns, Locust Grove Cemetery, Sloan's Crossing Pond and the Mammoth Cave Hotel. A bicycle lane along Highway 70 from Cave City will intersect the park bicycle trail at Chaumont.

A packaged thematic guided tour by van or bus along selected roads in the park may extend to other karst region visitor sites outside the park. As described in the preceding **CAVES** section, the tour will include cave experience and surface experiences easily accessible from roads. Planning for this proposal needs input from the concession operating the park tour shuttle system.

NORTH SIDE

Resource Description

Described as Hilly Country in the General Management Plan, the section of the park north of Green River is more remote than areas south of the river. Rugged terrain containing surface streams also differentiate this area from other geographic interpretive areas in the park. Several creeks drain into Green River from the north. Forested valleys of these creeks contain much wildlife and an extensive variety of wildflowers and other interesting vegetation. Magnolia trees and

mountain laurel thickets paint a colorful landscape when in blossom along the wet Prong of Buffalo Creek. A fine hardwood forest clothes the ridges.

A six-mile section of Nolin River flows from the north to enter Green River in this area. Nolin River valley includes First Creek Lake on the floodplain and red sandstone conglomerate cliffs notable for their height and vegetation cover.

This interpretive area includes extensive trails, but many are on old roadbeds and minimally maintained. Developed trailheads include parking for automobiles and recreation vehicles. Paved and gravel roads provide access to resources and developed and primitive campsites. Extensive evidence of past human habitation includes home sites, roads, churches, and cemeteries.

Visitor Experience Statement

The North Side interpretive area includes resources offering potential for diverse visitor activities. Driving along woodland roads can provide passive recreation such as pleasant windshield tours. Visitors might only occasionally contact other users, primarily near trailheads. Remote areas offer opportunity to escape the automobile road to find solitude on foot trails surrounded by woodland resources. The North Side lends itself to bird watching, hiking, backpack camping, and horseback riding. One trail is designated as accessible for mountain bicyclists. This is the quiet side that might appeal to people who want to escape the crowds that flock to the developed area near the Historic Entrance in the peak season. The North Side interpretive area offers a leisurely and un-crowded experience for groups or individuals.

Recommendations

The development of interpretive media on the north side of the park will reflect consistency with the backcountry character of the area.

Interpretation and Education Services staff will participate in formulation of the parks Backcountry Plan. Staff will evaluate planned rerouting and reconstruction of trails to assess their interpretive potential. The park Wayside Exhibit Plan and Publication Plan will reflect interpretive opportunities identified in the Backcountry Plan.

Park interpretive staff will explore the feasibility of developing a motor tour guide for the North Side. The route may include Green River Ferry

Future Program Description

Road, Good Springs Church Road, Ollie Road, and Houchins Ferry Road. A return route along Brownsville Road and Mammoth Cave Parkway can create a loop tour that extends through the South Side interpretive area. As with other motor tours this one will explore natural and cultural history themes reflected in resources on the route. Park staff can write, design, and publish the guide to interpret significant features.

Major trailheads will feature a dual panel bulletin case. At this time that will include trailheads at First Creek/Wet Prong, Lincoln/Collie Ridge, Temple Hill/First Creek, and replacement site for Maple Springs on Green River Ferry Road. Each case will include a map of the trail system, safety and regulation information, Leave-No-Trace minimum impact techniques, and information on resources encountered on trails.

The park staff will review the need and feasibility of providing information and way-finding media permanently placed at strategic trail locations. Printed media providing trail information, way-finding and interpretation will include trail maps, guidebooks, and trail folders. This combination of media will provide information and interpretation in levels of detail that meet most trail user needs.

SOUTH SIDE AND FLINT RIDGE

Resource Description

The south side and Flint Ridge interpretive area contains the most extensive caves and some of the finest examples of karst topography in the world, underground streams, fascinating landscapes, and abundance of vegetation and wildlife. The absence of surface streams distinguishes this area. This part of the Mammoth Cave Plateau physiographic division of the central Kentucky karst connects to the Dripping Springs Escarpment or the Sinkhole Plain by underground geology and hydrology. Surface streams flow only during rainy season and for short distances before disappearing into the caves beneath the surface.

A trailhead and short trail on Brownsville Road introduces visitors to one of the most scenic portions of Green River, Turnhole Bend. Another trailhead and trail to Cedar Sink offers visitors walking opportunities. Accessible interpretive trails at Sloans Crossing Pond and Sand Cave provides easy access to significant park features for all visitors. Historically, people traveled to Mammoth Cave through the

south interpretive area by stagecoach and later by train on a railroad spur from the town now known as Park City. Churches and cemeteries adjacent to roads encourage visitors to make connections between themselves and past and present human activities in the karst region. An overlook at Doyel Valley features wayside exhibits.

Visitor Experience Statement

Short trails and roads provide visitors limited access to park resources. Visitors can easily reach portions of trails near roads but this area offers few opportunities to access off-road experiences. Additional casual experiences such as overlooks and roadside pullouts will offer future visitors opportunities to spend more time enjoying resources in this interpretive area.

Recommendations

Park staff will evaluate potential for additional Wilderness on Wheels trail opportunities similar to those provided on the Heritage Trail and at Sloans Crossing Pond and Sand Cave.

The bicycle trail currently in place between the developed area and Carmichael Entrance Road will be planned for extension to link the park visitor center to Park City. Bike trail access points at Park City-Cavelands Heritage Center, Locust Grove Cemetery, and the Mammoth Cave Hotel will be provided with information kiosks. Features along the bike trail will be interpreted through low profile wayside panels. Integrated themes can reflect natural and cultural stories related to the railroad and other transportation used in the area.

A bicycle lane along Highway 70 from Cave City to link with the above described bicycle trail at Chaumont can include trailside exhibits. Park managers will consider making roads from Flint Ridge Road to Great Onyx and Crystal Caves available for motor touring.

The motor tour route described in **NORTH SIDE Recommendations** includes Brownsville Road, Mammoth Cave Parkway, and part of Houchins Ferry Road in this interpretive area. That tour guide will provide significant interpretation for visitors completing a large tour loop through both interpretive areas.

Future Program Description

IMPLEMENTATION PLAN

The implementation plan summarizes proposals presented in this long range interpretive plan, establishes priorities, identifies possible funding sources, describes some design and production considerations and recommends evaluation methods. The park staff will develop necessary funding requests to begin the federal funding process. They will also initiate contacts with potential partnership organizations to implement projects well suited to alternative funding.



SUMMARY OF PROPOSALS AND PRIORITIES/PHASES

NEAR-TERM

Complete planning and conceptual design for new visitor center exhibits.

Develop a park marketing plan.

Develop a distance learning program plan.

Develop and present activities that encourage local community audiences to become park users and supporters.

Participate in Caveland Marketing, 31 W Heritage Corridor, and Cavelands Heritage Center.

Improve services for special population audiences.

Improve information available to visitors about accessible experience opportunities.

Assemble and promote opportunities in three-tiered experience packages.

Implement park education plan.

Involve an advisory group in education program development.

Maintain education program currency with education trends.

Involve park education program with Kentucky Environmental Education Master Plan.

Establish a park publications committee.

Review and improve or augment park-produced site bulletins.

Implement current wayside exhibit plan.

Plan and produce orientation and interpretation wayside exhibits for bicycle trail.

Develop annual implementation plan based on LRIP and available budget.

Conduct routine visitor surveys and program cyclical studies. Incorporate value and significance of Mammoth Cave as an International Biosphere Reserve and World Heritage Site in interpretive media and services.

Maintain and strengthen existing internal and external partnerships and explore new partnership opportunities.

Adapt personal service program to target three audiences- day users, longer-stay users, and repeat visitors.

Develop a tiered decision making information program at the park visitor center.

Design, produce, and install interpretive media for Mammoth Cave Railroad Hike and Bike Trail.

Develop a hierarchy of cave tour options consisting of three levels- introductory, general, and specialty.

MID-TERM

Complete fabrication and Installation of Visitor Center Exhibits

Actively target the advanced information program to potential visitors and park neighbors; assuring that a higher percentage of stakeholders take advantage of the opportunity to acquire basic information before arrival at visitor center.

Update park sign plan.

Implement current visitor center way finding plan.

Improve services for special population audiences.

Make all existing media, facilities, and services accessible to the maximum extent feasible.

Implementation Plan

Evaluate potential sites for Wilderness on Wheels experiences and establish new sites where feasible.

Improve presentation of information about backcountry opportunities.

Implement park education plan.

Implement a professional education training program.
Maintain education program currency with education trends.

Link education program and the Mammoth Cave International Center for Science and Learning.

Revise park publication plan.

Develop an inexpensive rack card for mass distribution.

Revise and enlarge park brochure to reflect changes implemented from this plan and other park plans.

Redesign park newspaper.

Implement current wayside exhibit plan.

Plan and produce backcountry trailhead orientation and information wayside exhibits.

Plan and produce wayside exhibits at river access points.

Continue to conduct routine visitor surveys and program cyclical studies.

Continue to maintain and strengthen existing internal and external partnerships and explore new partnership opportunities.

Evaluate success of adapting personal service program to target three audiences- day users, longer stay, and repeat visitors.

Implement long-range interpretive plan recommended interim proposals until exhibit and audiovisual plans are implemented.

Design, produce, and install information and interpretive media for staging area.

Improve media capabilities at park amphitheater.

Design, produce, and install interpretive media for Mammoth Cave Railroad Hike and Bike Trail.

Actively work with concession managers to plan, develop, and implement information, interpretation, and other visitor services offered by concessions.

Evaluate cave tour program and set visitor capacity.

Develop tour packages combining cave tour and surface activities that mirror the three tier experience options- introductory, general, and specialty.

Continue and improve partnership between park and canoe outfitters that meet the needs of park and outfitters users.

Develop information and interpretation to describe four types of road experiences- parkway, park, rural, and backcountry.

LONG-TERM

Improve services for special population audiences.

Implement park education plan.

Maintain education program currency with education trends.

Implement publication initiatives described in park publication plan.

Incorporate value and significance of Mammoth Cave as an International Biosphere Reserve and World Heritage Site in Interpretive media and services.

Maintain and strengthen existing internal and external partnerships and explore new partnership opportunities.

Develop and implement an audiovisual plan for the park.

Expand and relocate interpretive material sales area in the visitor center.

Implementation Plan

Design, produce, and install interpretive media for Mammoth Cave Railroad Hike and Bike Trail.

Plan, produce, and distribute motor tour guides for Ugly Creek Road, Houchins Ferry Road, and Flint Ridge Road.

Explore potential of developing a loop motor tour guide route through the North and South sides.

Plan, produce, and install interpretive media at Mammoth Cave Ferry parking lot and Green River Ferry Road north of the river to inform visitors about experience opportunities on the North Side.
Explore potential to develop a packaged thematic guided tour through the karst region.

Explore potential to develop a packaged thematic guided tour through the karst region.

STAFFING

Mammoth Cave National Park Division of Interpretation and Education Personnel has significantly decreased. As a result staff can no longer provide cave tour service at the desired level and cannot meet the current and future needs of education districts in the Kentucky karst region.

MANAGEMENT AND OPERATIONS

Management and direction of interpretation and education functions will reside with Chief of Interpretation and Education. An Administrative Assistant will aid the office in carrying out fiscal programs, human resource actions, payroll processing, and execution of other administrative documents needed for effective operation.

A Program Services Branch Chief will be responsible for managing the division's personal service programs. This constitutes the largest percentage of the division's fiscal and human resources. This position will be responsible for analysis of visitation trends, recommending program adjustments, hiring the temporary work force, and coordinating fee management of Service wide Reservation System. With direct supervision of the supervisory park rangers, this position will also be responsible for the completion of projects assigned to interpretive staff.

A Shift Office Supervisor will provide consistent direction for cave tour operations. Duties of this position will include development of pay period and daily work schedules, adjustment of schedules in response to visitor demand and available staff, initiation of response to cave tour emergencies, maintenance of cave tour equipment and supplies, and control of keys and other property used in personal service operations.

The Education Coordinator responsible for the planning and carrying out of the park's formal education programming will report directly to the Chief of Interpretation and Education. This position will be the principle outreach coordinator for the division maintaining relationships with local school districts, Western Kentucky University, state education organizations, and informal educators.

INFORMATION SERVICES

The visitor center information and orientation functions and the cave tour ticket sales function are very closely integrated. Visitors need support of all three functions to make informed decisions about their choices among cave tour options. The only distinctions between these functions are the acts of ticket purchase and handling of money. Integrated activities related to the phone room, mail responses, electronic mail, visitor center desk, and the sales window aid visitors in decisions about experience opportunities throughout the park. In an effort to address the park's shortfall in appropriated operating funds, the phone room and the majority of the visitor center desk staff have been combined with the fee collection function.

Information and orientation is, however, a fundamental function of interpretation, and the coordination of information will be through the division's Visitor Use Assistant position. This position will be responsible for the accuracy and timeliness of park information. The incumbent will work closely with fee management and supervision to insure that all staff engaged in personal service information services are trained, audited and coached as necessary to insure the highest professional standards. The incumbent will coordinate the response to mail and e-mail information inquiries. All written material will be reviewed, revised, printed and the inventory monitored on a regular basis to insure adequate supplies. As the e-mail information request coordinator, the incumbent will have responsibility for reviewing the park web page and referring needed changes to the park's visual information specialist.

PROGRAM SERVICES

The greatest challenge in Interpretation and Education human resource management is the maintenance of a year round workforce with the flexibility needed to respond to seasonal variations in visitor demand for cave tours. The loss of permanent positions in recent years has resulted in the increased use of temporary positions to meet the year round need. To rectify this situation, four levels of field interpreters are proposed: permanent 025 GS 9 Supervisory Park Rangers (I), permanent full time GS 5 090 Guides, permanent subject to furlough GS 5 090 Guides, and temporary GS 4 and GS 5 090 Guides. (see Cave Operations Business Plan in the Mammoth Cave National Park Comprehensive Interpretive Plan)

The 025 GS 9 Supervisory Park Rangers will support the daily cave tour and surface program schedule from November to March. The 025 Park Rangers will supervise the Guides and carry interpretive project duties as well as park committee assignments. From September to November, and from March to June, the Ranger positions will have both field interpretation and an increase in supervisory responsibilities as permanent subject to furlough and temporary guides are added to the schedule. From June through August, each Park Ranger will also supervise a team of 15-20 temporary cave tour guides.

The permanent full time guides will conduct year round cave tours and seasonal surface programming, support shift office operations, and carry park committee assignments as needed.

The addition of permanent subject to furlough guides will support cave tours schedules in the Spring and Fall without over reliance on temporary employees.

The temporary guide force will allow the park to meet peak seasonal demand for cave tours. Interpretive managers anticipate some use of temporary employees to meet the heavy Spring break and Easter holiday demand. The majority of positions, however, will be concentrated in the traditional summer peak season of June through August. The park will maintain a significant number of temporary employees with local residence in an intermittent status to meet weekend and holiday demand in the Fall and Winter seasons.

The large temporary workforce presents Mammoth Cave National Park an opportunity to increase the diversity of park employees. Every opportunity will be taken to increase interest of minority populations in employment at the Park.

EDUCATION

The park's education program will be managed by a 1702 series Education Specialist. With the increasing need to keep park education programming relevant to the required program of studies of local educators, it is imperative for the permanent education staff to have as much professional education background as possible. Recent losses of permanent full time and subject to furlough education technicians have resulted in a decrease in year round education programming and a concentration of programming in Spring and Fall utilizing temporary

Implementation Plan

education technician positions. This has also resulted in an increased need for supervisory oversight as temporary employees develop the range of skills needed to work independently with large school groups that have varying educational objectives. To minimize this continuing impact on the expansion of outreach functions, it is recommended that the current subject to furlough Assistant Education Coordinator be elevated to the supervisory level and converted to full time.

It is unlikely that the Division of Interpretation and Education will return to having permanent subject to furlough education technicians. Consequently, division managers need to pursue other strategies for expanding year round programming with the highest level of professional educators as possible. Student Conservation Aids, formal internships with Western Kentucky University, and graduate education programming all need to be explored as possibilities.

It is likely that funding will be forthcoming for the establishment of the Mammoth Cave International Center for Science and Learning. This Resource Challenge initiative calls for an education coordinator to facilitate the dissemination of the knowledge gained through the Center's research program. The Center's Education Coordinator will be supervised by the Chief of Interpretation and Education. This position will work in close concert with the Center's research coordinator and the park's Environmental Education program. It is envisioned that primary schools currently participating in overnight programming will do so at the Center and will be introduced to visiting scientists and their research efforts.

VOLUNTEERS

Volunteers will be utilized to supplement information services, interpretation and education programming. As a matter of policy, volunteers will not be scheduled to conduct cave tours. Volunteers will however, but used on an emergency basis to meet the daily tour schedules if circumstances require. Volunteers will primarily be used as trailers on guided cave tours. Volunteers will be used to assist with information services at the visitor center information desk, the phone room, ticket sales lines, in library management, and in shift office operations. Volunteers will be intimately involved in the raptor education program, both for routine care and feeding of animals as well as programming.

FUNDING SOURCES

ANNUAL OPERATING FUNDS OR PARK BASE – FUND TYPE 01

This is the primary source of recurring operational funding used for park management, interpretation, visitor services, maintenance, and resource protection. Parks request base increases through the Operations Formulator System (OFS).

CHALLENGE COST-SHARE – FUND TYPE 01

The program provides a maximum of 50% cost-share grant to expedite mutually beneficial projects with outside sources. The program increases awareness and participation by the public in the preservation and improvement of National Park Service recreational, cultural, and natural resources. Park partners may include individuals, groups, companies, corporation, state and local agencies and other non-Federal entities that donate funds, equipment, supplies or labor to complete a park project. Projects are generally intended to be small, able to be completed in one year, and consistent with park planning documents.

CULTURAL CYCLIC MAINTENANCE – FUND TYPE 01

Funds are used for the maintenance and rehabilitation of historic structures and museum collections. Appropriate projects include predictable tasks performed on a fixed periodic basis with a cycle longer than one year. The work may be completed through contracts or seasonal day labor.

DONATIONS - FUND TYPE 26

Parks are authorized to accept and use donated funds to meet the purposes of the National Park Service. Use of these funds is strictly controlled, must be consistent with legislative authority, and must meet with the approval of the grantor.

Implementation Plan

EMERGENCY RELIEF AND STORM DAMAGE – FUND TYPE 04

Funding may be available for emergency repairs to park facilities damaged by acts of nature and structural fire. Requests for funding should be submitted to the Regional Office for review and approval.

EXHIBIT REHABILITATION AND PRESERVATION PROGRAM – FUND TYPE 01

The Major Rehab Program administered by Harpers Ferry Center (HFC) provides repair, rehabilitation or replacement of audiovisuals and exhibits, preservation of artifacts and museum specimens, and acquisition of historic furnishings. Interpretive media projects in newly authorized areas may also be submitted.

FEE PROGRAM – FUND TYPE 04

No-year funding to offset park base funding allows flexibility to carry base funding across fiscal years, but only on a very limited basis.

FEE DEMONSTRATION PROGRAM – FUND TYPE 25

The recreation fee demonstration program allows parks that collect fees to retain 80% of the revenues generated. The remaining 20 percent will be made available Service wide.

INFORMATION PUBLICATIONS PROGRAM – FUND TYPE 01

Park folders, handbooks, posters, and other publications prepared by Harpers Ferry Center for parks are funded from this account. Note: Regional offices frequently supplement funding for folders.

NATIONAL PARKS PASS – FUND TYPE 22

Seventy percent of proceeds from Pass sales remain with the selling park to fund approved projects. The remaining proceeds support projects Service wide.

PARKS AS CLASSROOMS – FUND TYPE 01

Funds may be requested to promote cooperative education programs combining park settings and classroom study. Eligible activities include those presented at the park, at schools and community organizations.

PARK CONCESSIONS FRANCHISE FEES – FUND TYPE 99

Eighty percent of concessions franchise fees generated at a park are available to that park for approved projects (concessions related needs, environmental and energy efficiency projects, visitor services, resource management programs). The remaining 20 percent will be made available for service wide projects.

REGULAR CYCLIC MAINTENANCE – FUND TYPE 01

To qualify for funding projects must be submitted to the park's ten-year cyclic maintenance program. Funds may be used to maintain park roads, trails, building, utility systems, and other facilities. Appropriate projects include tasks recurring on a fixed periodic cycle that is longer than one year and no longer than ten years. Some Regions also fund Exhibit Cyclic Maintenance and Natural Resources Cyclic Maintenance from this fund source.

REPAIR AND REHABILITATION – FUND TYPE 01

Funding is used to cover the cost of repair and rehabilitation of existing facilities, roads, trails and utility systems. Permanent employee's salaries should not be charged to repair and rehabilitation accounts.

VOLUNTEERS-IN-PARKS (VIP) – FUND TYPE 01

Funding may be requested for training and incidental expenses such as uniforms, period clothing, local travel, supplies, lodging, meals and other direct costs chargeable to the Volunteer-in-Parks Program.

MEDIA DESIGN AND PRODUCTION

There are many options for parks that want to accomplish media projects. Harpers Ferry Center staff, park staff, contractors and others can do the work; development processes vary with the source of media development assistance. Other project considerations include value analysis, Development Advisory Board review, government contracting procedures, and the need for partner collaboration. Park staff should collaborate with media specialists in developing an effective and efficient strategy.

STRATEGIES FOR DEVELOPING MEDIA PROJECTS

Who Will Do the Work?

Major tasks for team members include project management, review, research, planning, design, contracting, detailing, fabrication and evaluation. Team members can be assembled from several sources. Park staff may have expertise to lead or participate in project development. Harpers Ferry Center can develop projects in-house or through contractors or help parks task assist programs or the Interpretive Media Institute. Parks may locate contractors through a request for proposal, Harpers Ferry Center general indefinite quantity contractor lists, or a park indefinite quantity list. Other sources of possible assistance include subcontractors, architectural firms, partners, cooperating associations, friends groups, park volunteers, support offices, clusters, neighbor parks, regional offices and service centers.

How Will They Do It?

Development processes vary, and tend to be linked to team preferences. Harpers Ferry Center processes start with the Long-Range Interpretive Plan for guidance and proceeds through Schematic Design, Concept Design, Final Design, and Fabrication. Contractors typically follow a process including Master Plan, Schematic Design, Concept Design, and Fabrication. Architectural firms may follow Concept Design with Schematic Design, Construction Documents, and Construction. Curators, Smithsonian, American Association of Museums and others can suggest additional processes.

How Long Will It Take?

Schedules vary according to project conditions and team member availability. A normal process could include two years, one year for planning and design and a second year for production. Accelerated projects, not usually practical, may only take six months for planning and design and six months for production. A more extended project could require five years, 3.5 for planning and design and 1.5 to produce. Funding and facility development problems may delay either schedule.

How Much Will It Cost?

Project cost can vary. Determinates include available money, estimated cost, who controls the budget, and what controls are used.

What Resources Does the Park Have?

Survey park staff to identify specialized skills for media work. Identify graphics, film footage, artifacts, specimens, exhibit spaces, facilities, and other infrastructure that can contribute to a successful project.

KEYS TO SUCCESSFUL MEDIA PROJECTS

Launching a Media Project

Recognize the importance of media in the park's overall program for visitors.

Insure that interpretive themes and objectives are defined before media planning.

Honor plans that have been approved – Long Range Interpretive Plans, General Management Plans, media plans.

Insure that project goals are clearly laid out in advance.

Involve media specialists in facility design from the beginning.

Make comments on media concepts, techniques, and solutions early in the process.

Recognize the level of effort required on the part of park staff, and plan accordingly.

Implementation Plan

Invite park staff with needed knowledge, skills, and abilities to participate in planning.

Assign a project manager for the park, and grant authority to make decisions.

Planning, Designing, and Producing the Project

Take time to prepare and use effective contracts and project agreements.

Allow the project team to exercise creativity - don't provide the solution up front.

Manage the budget in a clear and efficient way for the project team; don't let funding lapses or glitches stall the project.

Provide timely and constructive reviews of project submittals.

Insure that project requirements, policies and standards are met; consider universal design, object conservation, diverse audiences, and sustainability.

Work with partners and other stakeholders to promote teamwork, and to resolve potential problems and conflicts.

Systematically evaluate the effectiveness of media throughout the process.

Take ownership of the project before, during, and after completion.

EVALUATION

INTRODUCTION

Evaluation is an essential part of planning and operating a park interpretive program. Over the years it has become increasingly evident that interpretation facilities, media and activities benefit from evaluation. Evaluation should begin during planning and development of interpretive program components. A variety of evaluation activities tailored to specific tasks and questions to be answered should be an ongoing process following program implementation.

A complete evaluation program should include three cycles.

Front-End Evaluations are appropriate when conceptual planning considers themes, story lines and program ideas.

Formative Evaluations are done during a process, such as early fabrication of exhibits and test run of activities. Formative evaluations are increasing in the Park Service, especially with the implementation of GPRA and value analysis.

Summative or Remedial Evaluations are performed at the end of a process. Summative evaluations have been more common in government agencies. Performance is measured and assessed at the end of a fiscal year. Achievement of media objectives is determined after the media are installed for a period of time. Achievement of short-term educational goals is measured at the conclusion of a program.

NATIONAL PARK SERVICE EVALUATION PROGRAM

Visitor Services Project assesses visitor backgrounds, preferences, activities, and opinions through surveys. The Cooperative Park Study Unit (CPSU) at the University of Idaho coordinates the program.

Government Performance and Results Act (GPRA) holds offices and parks accountable for defining and assessing desired outcomes. Park staff conducts evaluation of goal accomplishment annually.

Value Analysis Program assesses the cost effectiveness of design and construction projects in excess of \$500,000.

Implementation Plan

Post Occupancy Evaluation Program (POE) assesses the effectiveness of interpretive facilities and media. The program is coordinated by Denver Service Center and Harpers Ferry Center and may be applied following implementation of media proposals.

Post Construction Evaluation coordinated by Denver Service Center looks at the quality of construction of facilities built by DSC.

Park Initiated Evaluations are conducted or contracted by parks with assistance from regional offices, service centers and the Washington Office of Interpretation and Visitor Services.

TECHNIQUES

The following techniques are recommended for consideration as **Park Initiated Evaluations** for implementation at Mammoth Cave National Park. This is not intended as an all-inclusive list. These methods were selected because they can be applied with relative ease and because they represent techniques with low to moderate cost and time commitments that yield moderate to high value/benefits. [A Field Guide for Evaluating National Park Service Interpretation](#) by Brett Wright and Marcella Wells provides a complete description of these and other techniques.

Front End Evaluations

Recorded observation and dry runs are appropriate at Mammoth Cave to determine that each component of interpretive and education program is meeting the needs of visitors and park management. Simple dry runs in the current ticket area when preparing for Phase II of visitor center development can analyze exhibit concepts before investing in permanent exhibit production and installation.

Importance/Performance Analysis

Cost - Low Time - Moderate Value - High

This analysis, more quantitative than qualitative, is an empirical test used to obtain assessment of visitor satisfaction. The analysis helps determine which areas of a program require the most resources and attention, which resources could be reduced or eliminated from particular areas of a program, or which efforts should be maintained.

This technique is easily understood, easily displayed, easily interpreted to obtain data that can be applied readily to program decisions. It can be used to evaluate both overall program as well as single activities.

Auditing

Cost - Moderate Time - Moderate Value - Moderate/High

Auditing helps supervisors guide development of interpretive activities and interpreters improve their performance. The auditor and interpreter set and discuss objectives prior to the audit. The auditor then conducts the formal audit using checklists adapted to the program being audited. A post-audit conference, a direct two-way communication, must take place as soon as possible after the formal audit. It provides prompt feedback to the interpreter being audited and provide basis for follow-up coaching. The evaluator is able to assess interpreter's actual performance in terms of content and technique. Coaching aspects of the audit to lessen the intimidation of the evaluation process and provide the opportunity to correct inconsistencies before they become habit.

Interviewing

Cost - Low/Moderate Time - High Value - High

There are three approaches to interviewing. In each a single interviewer facilitates the conversation to gather data that reveals the interviewees perspective by allowing them to express their understanding of a situation in their own words. The Informal Conversational Interview, or unstructured interview, presents open-ended questions in spontaneous, free-flowing conversation. The Interview Guide Approach, or semi-structured interview, uses predetermined questions or issues, but the interviewer adapts wording and sequence flexibly during the interview. This approach may be used effectively for group interviews where the facilitator focuses the conversation. The Standardized Open Ended Interview presents the same carefully worded questions in the same sequence to all interviewees. This method reduces interviewer bias and makes data analysis easier than other methods. Regardless of the approach to interviewing, response rates for interviews are usually higher than with a questionnaire and more complex issues can be addressed.

Focus Groups

Cost - Low Time - Moderate Value - High

Focus groups are small groups formed specifically to discuss a particular question, concern or problem and led by a well-trained discussion leader who uses a study guide to facilitate the topic of discussion. Focus groups are helpful as formative and summative evaluations. They capitalize on the value of group dynamics to assure high level of validity while examining issues and concerns in a social context. This technique yields qualitative information often missed in statistical studies. It can be used to evaluate the message transmitted, determine visitor perceptions, measure strengths and weaknesses, or anticipate visitor needs for both personal and non-personal interpretation. Focus Groups: A Tool for Evaluating Interpretive Services, a National Park Service training package, describes procedures for conducting focus group evaluations.

Observation

Cost - Low Time - Moderate/High Value - Moderate/High

This qualitative technique can effectively evaluate interpretive episodes as they occur. Observing people in a natural setting can reveal high quality information not revealed by more quantitative techniques. Observational data helps understand the impacts of interpretive programs without encumbering visitors. It can be applied to interpretation in a variety of overt and covert observation strategies (direct, indirect, unobtrusive, and interactive) to gather observational data. The evaluator might observe Statistical Evidence such as program attendance and other visitor use data. Physical Evidence of tile and carpet wear around exhibits, trail wear and wear on exhibit material can expose visitor interests and desires. Archival Evidence includes permits, sales records, number of complaints and compliments and trail logs. Participant Observation of non-participation, time dedicated to a particular activity, body language and language and conversation reveals interests. Contrived Observation techniques use video, audio tape, or time-lapse photography.

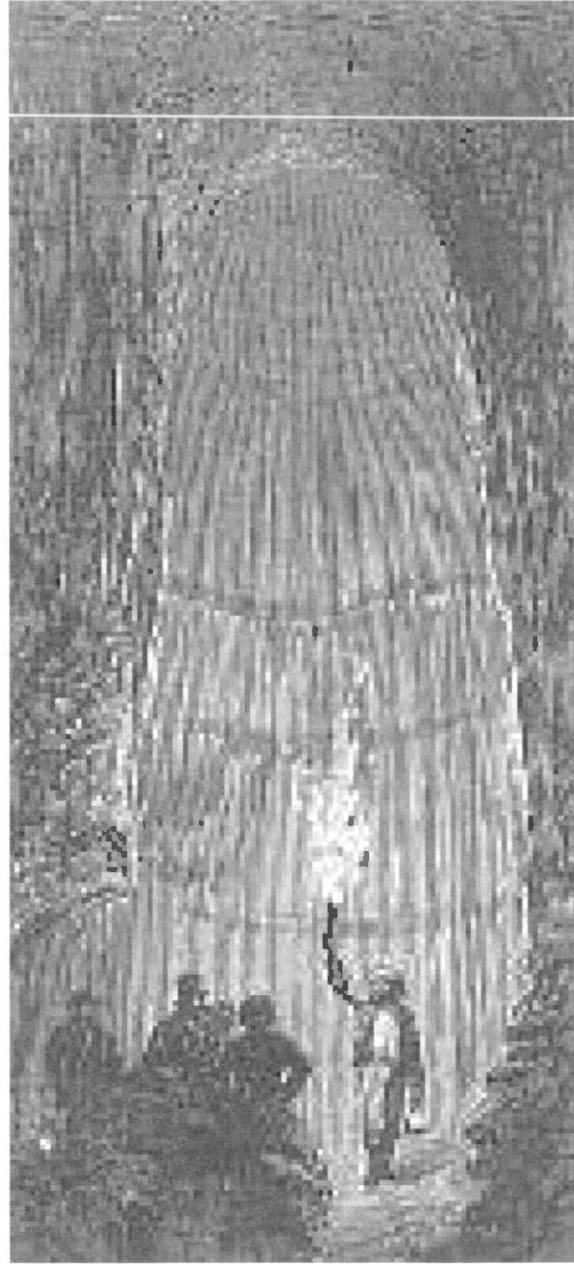
Connoisseurship and Criticism

Cost - Moderate Time - Low/Moderate Value – Moderate

The strength of this technique lies in its capability to turn trained observation into statements about interpretive quality through interpretation and evaluation of what is observed. This qualitative method yields valuable information about content, quality, and presentation of interpretive activities. An evaluator with training, experience and refined perceptual capabilities conducts the evaluation and prepares a critical narrative to help interpreters see, understand and appraise situations being critiqued. The written critique includes three components. A descriptive section presents a vivid and factual description of the situation. An interpretive section accounts for the interactions perceived in the situation by interpreting processes observed. The evaluator presents value judgments based on criteria related to the specific situation and the needs of the creator or presenter of the interpretive experience.

Implementation Plan

APPENDICES



Appendices

PLANNING TEAM AND CONSULTANTS

National Park Service staff, representatives of partner organizations, and consultants completed this long-range interpretive plan.

MAMMOTH CAVE NATIONAL PARK

Michael Adams	Chief of Interpretation & Education
George Corrie	Park Ranger
Chuck DeCroix	Park Guide
Sharon Ganci	Environmental Education Coordinator
Henry Holman	Management Assistant
Joy Lyons	Program Services Supervisor
Colleen Olson	Park Guide
Bruce Powell	Deputy Superintendent
Kathy Proffitt	Park Ranger
Tres Seymour	Visual Information Specialist

HARPERS FERRY CENTER

Michele Hartley	Audiovisual Production Assistant
Bruce Kaiser	Wayside Senior Production Manager
Keith Morgan	Park Ranger – Planner (Team Leader)
Lisa Royse	Museum Exhibit Staff Curator

PARK PARTNERS

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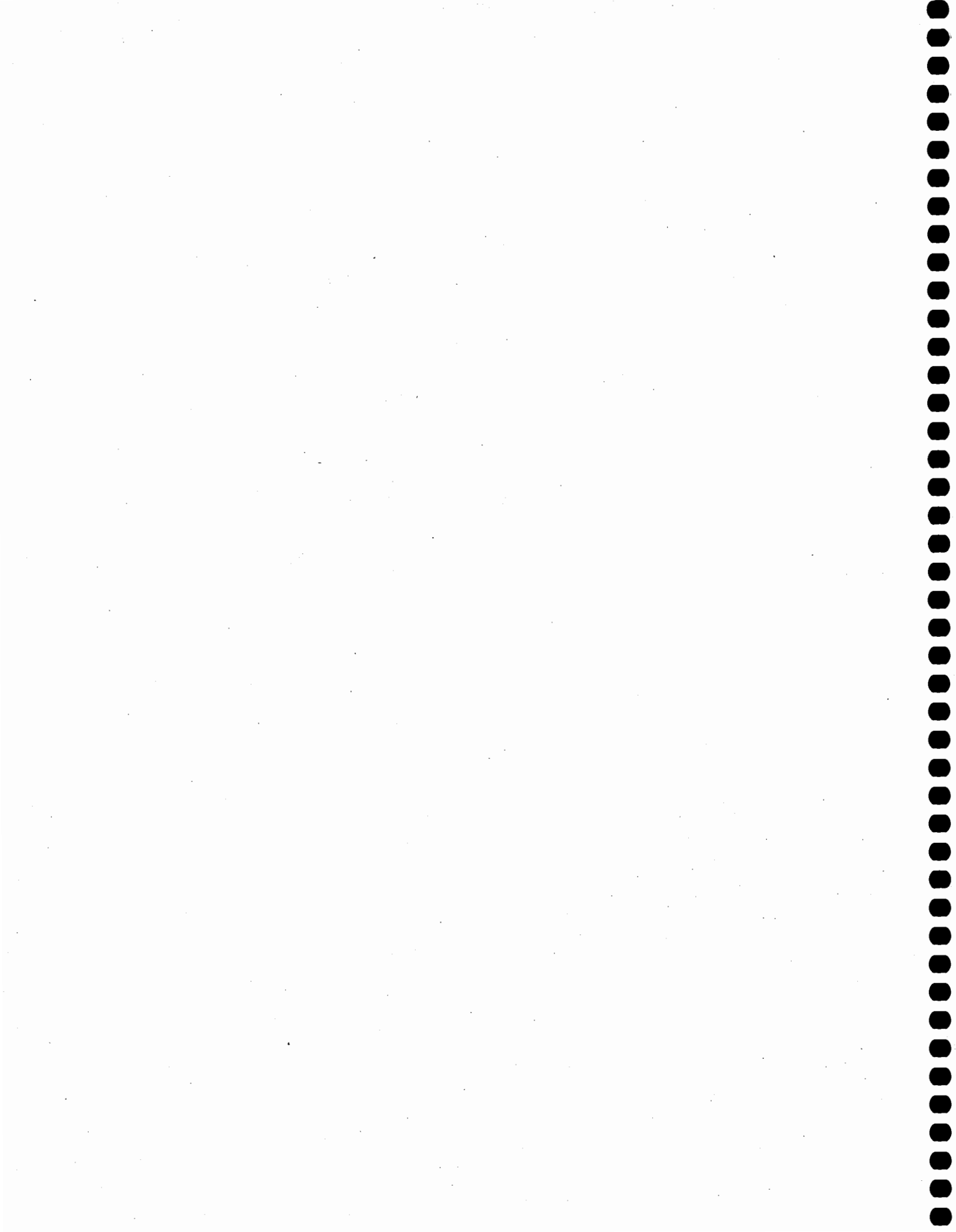
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