



Cave and Karst Management Plan

The National Park Service (NPS) is beginning the initial steps in development of a cave and karst management plan and environmental assessment (plan/EA) for Mammoth Cave National Park. During this planning process, the NPS is asking for your input so that we can gain a better understanding of the needs, experiences, and preferences of our park partners, adjacent communities, key stakeholders, and visitors. This will help the NPS identify opportunities to meet those needs while also achieving our mission to preserve and protect resources.

Please join us as we embark on this planning process and provide your ideas to help shape the management of the park's cave/karst resources. The public's support and involvement is needed to develop the plan which will evaluate the natural and cultural resource conditions and visitor experiences within the cave and karst systems and help define desired future conditions and appropriate uses. Please keep in mind this is the beginning of the input process and there will be future opportunities to provide additional input as the planning process moves forward.

Plan Purpose

The purpose of this plan is to provide a consistent framework for managing the world-class cave and karst resources in the park and to work cooperatively with partners within the broader Mammoth Cave Area International Biosphere Reserve. The plan will provide direction to protect and conserve the park's complex and sensitive resources through the use of science to promote stewardship and understanding. A plan is needed to address:

- 1) Resource protection issues, particularly those related to visitation, research, and/or resulting from aboveground activities that can impact cave resources belowground; and
- 2) Sustainable public enjoyment and education.

Plan Goals

The draft goals of the plan/EA are as follows:

- Clarify park policies to protect cave and karst resources while providing an appropriate level of access.
- Develop management strategies to address resource protection and restoration of degraded cave and karst resources.
- Ensure adequate safety for people accessing caves, while recognizing some people desire an experience that is more challenging and some research activities carry inherent risks.
- Develop monitoring methods using sound science to ensure quality visitor experiences and protection of the sensitive cave and karst resources.



- Develop visitor use management strategies that seek to balance increasing visitation and resource protection in a fiscally responsible manner.
- Include a compilation of management policies, practices and actions related to resource protection, physical security, safety, operations and maintenance.
- Identify restoration, rehabilitation, and modification projects for natural or man-made cave entrances for resource protection and visitor access.
- Identify structural upgrades to mitigate impacts due to water infiltration
- Promote accessibility and universal access.
- Develop and maintain partnerships to promote responsible research, resource protection, and sustainable use at the park.
- Develop monitoring strategies to inform park management decisions.

Key Issues and Elements

- *Integrity of Cave Environment* – The park faces numerous issues related to the condition of its natural systems and the overall cave environment. Air flow, temperature, relative humidity, and condensation can affect cave conditions, natural and cultural resources, and park infrastructure. Cave atmospheric conditions are also altered by visitor activities, surface activities, and changing climate. Visitors, cave management, and construction activities can introduce or promote growth of foreign biota (e.g., growth of algae near cave lighting). Some cave trails, particularly those with a dirt surface, are prone to dust production, which impacts natural and cultural resources in certain areas. Cave use by visitors, park staff, cooperators, and researchers, have cumulative effects to the cave’s natural and cultural resources.
- *Cave and Karst Restoration* – The park is pursuing approaches for deciding how to appropriately restore caves to protect their natural and cultural resources.
- *Water Quality, Quantity, and Flow* – Activities adjacent to and within park boundaries (i.e., industry, agriculture, infrastructure development, transportation corridors, etc.) can threaten water quality, which affects sensitive karst formation and cave habitats, including threatened and endangered species. Changes to surface and groundwater quantity and flow regimes connected to dams, development, and oil and gas productions can also disrupt habitats and affect natural and cultural resources found within the park’s caves.
- *Administrative Guidance and Actions* – The park is striving for updated management guidelines, best practices and standard operating procedures related to several management activities, including permitting (i.e. research and special park uses); maintenance; educating visitors; orienting new park staff and contractors; gating cave passages; exploration and discovery protocols.
- *Appropriate Access and Use* – The park is challenged to provide adequate opportunities for visitors, researchers, and staff to experience cave resources in a sustainable, appropriate manner. With increasing visitation, it becomes more difficult to meet visitor demand. Current cave use and tour routes may be unable to meet future visitation levels in a manner that provides a meaningful visitor experience and adequate resource protection. Challenging topics related to this issue include:
 - Tour size, seasonality, variety, and frequency
 - Providing adequate visitor facilities within the cave
 - Maintaining an environment for visitors and staff that reduces harmful interactions
 - Resource protection
 - Park-sponsored, large-scale special events
 - Cave zoning and acceptable uses in caves
 - Gating caves as appropriate to control non-authorized visitation
 - Evaluating requests of non-NPS special-use permits for activities in the caves

Draft Concepts

Preliminary Alternative Concept A (No Action): Continuation of Current Management

The National Environmental Policy Act (NEPA) requires that a no-action alternative be analyzed. This alternative describes existing management and policies and establishes a baseline. Existing management activities at the park include:

- As possible, provide a number of tour options that seeks to meet visitation levels from recent years.
- Follow current management guidance on the number of people per tour.
- Provide a range of cave opportunities that accommodate large tours as well as more immersive experiences; however, focus on large tours as needed to meet demand.
- Maintain the current level of resource management protection.



Preliminary Alternative Concept B: Small Tour Sizes with a High Level of Resource Protection

Under preliminary alternative B, park management would focus on providing cave experiences that include smaller tour sizes and a high level of natural and cultural resource protection. The following serve as examples of the types of strategies and actions that may be considered under this alternative:

- Simplify the available tour options so that visitors can more easily plan their trip and choose a tour that is right for them.
- Adjust the number of people per tour to provide a more engaging experience – adjustments would largely be made within zoning categories.
- Develop regional partnerships to improve how visitors gain information on additional caving opportunities in the area if their desired experience is not available at Mammoth Cave.
- As possible, focus on providing cave opportunities that do not require previous caving experience, and are appropriate for a variety of skill and comfort levels.

Preliminary Alternative Concept C: Large Tour Sizes and Access to Additional Cave Routes

Under preliminary alternative C, park management would focus on providing larger tour sizes while minimizing natural and cultural resource impacts. The following serve as examples of the types of strategies and actions that may be considered under this alternative:

- Evaluate expanding the types of tour options available by making infrastructure improvements or developments to some routes.
- Potentially keep the number of people per tour similar to those currently used – any adjustments would be made within zoning categories.
- As possible, provide a variety of cave opportunities that range from no previous experience to advanced caving opportunities as well as scientific study and exploration.

Plan Timeframe

- March 12 to April 13, 2018 – Seek public input on the plan and open houses—March 20 (Cave City, KY) and March 21 (Brownsville, KY)
- May 2018 – Develop alternatives
- September 2018 – Develop a recommendation for a preferred alternative
- Spring 2019 – Public review of plan/EA

How you can be Involved

The National Park Service welcomes your input. During this meeting and throughout the public comment period (March 12 to April 13, 2018) you can help us by sharing your thoughts on the plan's key issues and goals.

There are several ways to provide input on the plan/EA:

- Fill out a comment card today
- Submit comments online (preferred method): <http://parkplanning.nps.gov/MACA>
- Submit written comments:

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