



Foundation Document Overview

Timpanogos Cave National Monument

Utah



Contact Information

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Purpose



TIMPANOGOS CAVE NATIONAL MONUMENT protects a scientifically important high-elevation, fault-controlled cave system and associated natural processes while promoting research, public understanding, stewardship, and enjoyment.



Significance

Significance statements express why Timpanogos Cave National Monument resources and values are important enough to merit national park unit designation. Statements of significance describe why an area is important within a global, national, regional, and systemwide context. These statements are linked to the purpose of the park unit, and are supported by data, research, and consensus. Significance statements describe the distinctive nature of the park and inform management decisions, focusing efforts on preserving and protecting the most important resources and values of the park unit.

- **Cave System.** The well-preserved, high-elevation cave system showcases delicate ecosystems with an abundance of cave formations in a variety of forms and colors, providing opportunity for scientific discovery and intimate access to the resources.
- **Cave Geology.** A unique intersection of geological processes continues to create the canyon and caves. This began with rising hydrothermal fluids mixing with the water table dissolving passages and precipitating minerals along faults, resulting in an unusual combination of colored speleothems.
- **Cave Trail.** The challenging 1.5 mile-long trail to the cave system ascends 1,067 feet, providing visitors the rare opportunity to hike through more than 200 million years of geologic time and immerses them in the constantly evolving landscape of American Fork Canyon and its rich diversity of wildlife and vegetation.
- **Human Component.** The establishment of the monument in the early 20th century is a remarkable example of visionary, determined efforts by local citizens to protect an extraordinary natural resource. Today, its proximity to an ever-growing urban community provides opportunities for a diverse group of visitors to experience this preserved natural setting.



Fundamental Resources and Values

Fundamental resources and values are those features, systems, processes, experiences, stories, scenes, sounds, smells, or other attributes determined to merit primary consideration during planning and management processes because they are essential to achieving the purpose of the park and maintaining its significance.

- **Cave System**
- **Visitor Experience**
- **Opportunities for Scientific Study**
- **Cave Trail**

Timpanogos Cave National Monument contains other resources and values that may not be fundamental to the purpose and significance of the park, but are important to consider in management and planning decisions. These are referred to as other important resources and values.

- **Cultural Resources**
- **Surface Ecosystem**



Interpretive Themes

Interpretive themes are often described as the key stories or concepts that visitors should understand after visiting a park—they define the most important ideas or concepts communicated to visitors about a park unit. Themes are derived from—and should reflect—park purpose, significance, resources, and values. The set of interpretive themes is complete when it provides the structure necessary for park staff to develop opportunities for visitors to explore and relate to all of the park significances and fundamental resources and values.

- **Geology.** Formed through complex geologic processes, the narrow fault-controlled passages of the well-preserved, high-elevation Timpanogos Cave System provides an intimate experience with abundant cave formations in a variety of forms and colors. This diverse environment affords the opportunity for personal connections through cave science, research, and new discoveries.
- **Natural History.** Timpanogos Cave National Monument illustrates natural processes such as the water cycle, air quality, and ecological and climatological changes. The cave system and narrow, rocky canyon walls provide habitat for a variety of plants and animals, demonstrating the diversity, adaptability, and complexity of nature in the eastern Great Basin and western Rocky Mountains.
- **Cultural History.** American Fork Canyon has provided food, water, shelter, and recreation to generations of people over hundreds of years. Understanding the dynamic human influences on the region provides perspective and awareness of the relationship between people, the land, and its fragile resources.
- **Preservation and Stewardship.** The establishment of the monument in the early 20th century is a remarkable example of visionary, determined efforts by local citizens to protect an extraordinary resource for its beauty and scientific value. The legacy of these early preservationists leads to a continued tradition of preservation and stewardship of Timpanogos Cave National Monument.
- **Recreation.** The steep 1.5-mile trail provides a challenging and physically invigorating experience that immerses visitors in the constantly evolving landscape of American Fork Canyon, its rich diversity of wildlife and vegetation, and promotes physical fitness and a greater appreciation for the natural world.

Description

Timpanogos Cave National Monument consists of 250 acres in the rugged American Fork Canyon within a 30-minute drive for more than 1 million residents of the rapidly growing southern Wasatch Front, equidistant from Salt Lake City 30 miles to the north and Provo to the south. The monument is primarily on the northern slope of 11,750-foot Mount Timpanogos and is surrounded by the Uinta-Wasatch-Cache National Forest.

The monument contains nine known caves including Timpanogos, Hansen, and Middle Caves, connected by artificial tunnels blasted in the 1930s, and together referred to as the Timpanogos Cave System. The Timpanogos Cave System runs along a fault zone roughly perpendicular to the nearby Wasatch Fault. The caves have become best known for the diversity and coloration of speleothems, and unusual speleogenesis, involving rising hydrothermal waters mixing with colder groundwater at the water table to dissolve the limestone along these faults. The other caves include the Grotto, a waiting area for tour operations, while the others are infrequently visited due to their small size, cliff exposure, and safety concerns related to access.

The limestone caves can only be reached by a challenging 1.5-mile hike up a paved trail with a nearly 1,100-foot elevation gain. The zigzag trail passes through native ecosystems that vary with elevation, offering the opportunity to view a variety of wildflowers that grow beneath Douglas-fir, white fir, maple, gambel oak, chipmunks, golden-mantled ground squirrels, lizards, and many bird species can also be seen along the trail.

While traveling to the caves, visitors get an introduction to area geology while hiking past more than 200 million years of geologic time as they ascend the mountain passing many geologic layers. The grade of the trail provides a challenge to all visitors regardless of physical fitness level. Rockfall from the steep canyon walls is a safety concern, with particularly hazardous trail sections marked with a painted stripe where visitors are advised not to stop along the trail. The winding, scenic route offers outstanding panoramic views of American Fork Canyon, the Wasatch Range, and Utah Valley.

Visitor access to the caves is limited to ranger-guided cave tours, which are currently offered approximately 35 to 40 times daily throughout the summer season. The 55-minute cave tour is limited to 16 people and travels 0.5 mile along a surfaced, lighted route.

Tours begin at the entrance to Hansen Cave, traveling through human-made tunnels to Middle Cave, then Timpanogos. The narrow passages and chambers reveal extraordinary cave features throughout the experience. The diversity of speleothems, including stalactites, draperies, and helictes in a variety of colors make the caves a memorable experience for visitors. The Great Heart of Timpanogos, a large stalactite, has long been a visitor favorite, as well as the abundance of helictes seen throughout the tour. While unseen, the cave environment contributes to the visitor experience with cool temperatures, high humidity, and occasionally the rarely seen, but ever present biodiversity of life forms in the caves.

Cave resources require careful management and documentation. Underground resources are generally insulated by the surrounding rock providing stable temperatures, airflow, and hydrology for cave ecosystems. However, changes in climate and surface management can create what may be perceived as small alterations but result in significant impacts on resources dependent on an unchanging environment.

In addition to the historic cave trail and the caves themselves, the monument maintains a visitor contact station, picnic areas, and a self-guided interpretive nature trail along the floor of the canyon.

The monument's mission is to preserve the cultural, natural, and scientific resources of the area, specifically the Timpanogos Cave System, while providing public use and enjoyment.

