

ENVIRONMENTAL ASSESSMENT
NEW VISITOR CENTER AND SEPTIC SYSTEM
HOVENWEEP NATIONAL MONUMENT

U.S. Department of Interior
National Park Service
Hovenweep National Monument

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ENVIRONMENTAL ASSESSMENT, NEW VISITOR CENTER AND SEPTIC SYSTEM
HOVENWEEP NATIONAL MONUMENT

Summary:

Hovenweep National Monument proposes to build a new visitor center/administrative office and parking lot at the Square Tower unit. The new facilities would be out of sight of the ruins on the rim of Little Ruin Canyon. The existing Hovenweep ranger station, which is in sight of the ruins, would eventually be removed. A new wastewater treatment system (septic tank/leach field) would be built to serve the visitor center and existing campground and residence center. The existing system serving the campground and residences overflowed in 1999 and is at risk of failure again at any time.

The proposed construction would improve the capacity for visitors, interpretative exhibits and administrative needs, and would eliminate the risk of failure of the sewage treatment system. Impacts to natural and cultural resources would not be significant.

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PURPOSE AND NEED

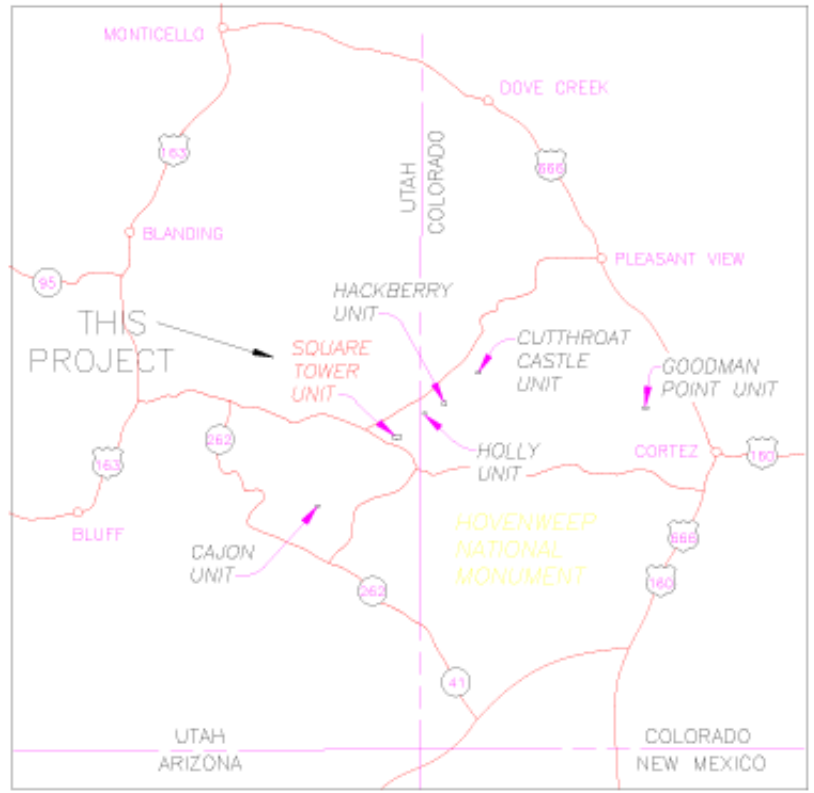
The Hovenweep ranger station is the primary administrative building for the monument. It serves as a visitor contact point, and houses staff offices and interpretive exhibits.

The ranger station was built in 1925 and moved to Hovenweep in the 1950s. The 610 square foot building has three rooms and one unisex bathroom for both staff and visitors. Visitation has increased from less than 5000 when the ranger station was moved to Hovenweep, to nearly 50,000 people per year in 1999. The building was not originally constructed as a public facility and has deteriorated over the years, and space is no longer adequate for the levels of visitation that are occurring.

The sewage treatment system (septic tank and leach field) serving the monument's housing area and campground also needs to be replaced. The septic tank, piping and leach field are all saturated with sludge, and the system overflowed in March 1999.

The purposes of this project are:

- To provide a focal point for visitor education and information
- To provide a collection point for visitor fees
- To reduce the visibility of development from the primary cultural resource area (the canyon rim)
- To provide office space for staff
- To provide space for visitor services and equipment (restrooms, water, emergency medical services, law enforcement, search and rescue etc.)
- To replace the failed sewage treatment system



AREA MAP

ALTERNATIVES CONSIDERED

Alternative 1. No Action

Under this alternative, the monument would continue to use the existing Hovenweep ranger station and the existing septic tank and leach field for the residence area and campground. Problems associated with the building, including repair needs, inadequate space for current levels of visitation, and rodent and potential hantavirus problems, would continue. Continued use of the wastewater treatment system would require pumping the septic tank quarterly and treating the system weekly with bacterial enzymes which accelerate the sewage decomposition process. The system would continue to be at risk for clogging and sewage overflow, which could violate health standards.

Alternative 2 (proposal). Build new visitor center, trail and wastewater treatment system.

Under this alternative, a new 3800 square foot visitor/administrative center, with courtyard, would be built approximately 500 feet southeast of the existing ranger station, along the existing road to the campground. A 34,000 square foot (0.78 acre) paved parking lot, capacity 31 spaces plus four oversized spaces, would be build adjacent to the visitor center. A new septic leach field would be excavated about 225 feet east of the new visitor center (north of the existing housing area). New sewer and water lines would extend from the visitor center to the new leach field and an existing water line near the residence area, following the existing road bed and about 500 feet of previously disturbed water line corridor. A new barrier-free trail (6 feet wide, soil cement and recycled plastic boardwalk surface, not over 12:1 slope) would be built from the visitor center 1000 feet south to the rim of Little Ruin Canyon.

The existing ranger station, shed, parking lot, and access road would eventually be removed and the area revegetated.

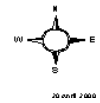
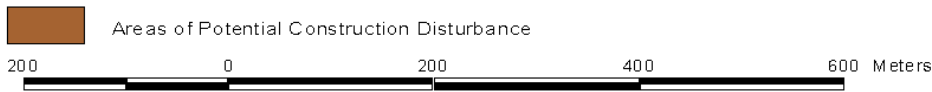
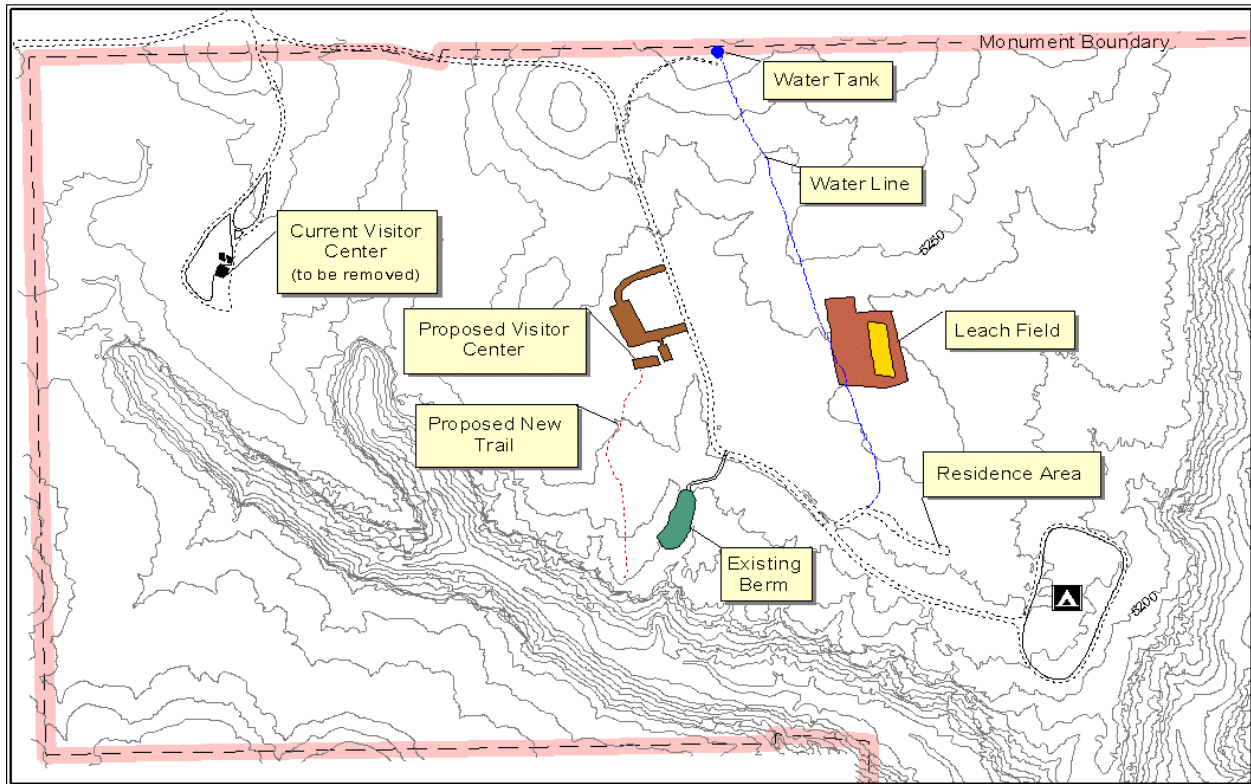
ENVIRONMENTAL CONSEQUENCES

GEOLOGY/SOILS/VEGETATION

Affected Environment

The project is located in the Square Tower unit of Hovenweep, on Cajon Mesa and adjacent to the head of Little Ruin Canyon. The primary geologic formation is Cretaceous-age Dakota sandstone. Topography on the mesa top is flat to gently sloping. Slopes at the proposed visitor center site are approximately 3 percent or less, with a low ridge rising about 20 feet between the existing ranger station and proposed visitor center.

Proposed New Visitor Center and Wastewater Treatment System Hovenweep National Monument--Square Tower Unit



Soil at the project site is eolian clayey sand ranging from zero to five feet deep. Bedrock is exposed at the surface on portions of the site. The percolation rate for soil at the leach field site is 30 minutes per inch, which is the minimum necessary according to Utah state health regulations.

Cajon Mesa is part of an area known as the Great Sage Plain, dominated by big sagebrush (*Artemisia tridentata*). The project site also includes a few pinyon (*Pinus edulis*) and Utah juniper (*Juniperus osteosperma*) trees, and scattered desert shrubs and grasses.

Environmental Consequences, Alternative 1

Existing conditions would continue.

Environmental Consequences, Alternative 2 (proposal)

Vegetation would be cleared and hard surfaces installed on approximately 1.25 acre for the new construction of the visitor center and parking lot. New trail construction would disturb approximately 6000 square feet (1000 feet by 6 feet). These surfaces would be generally impervious, but portions of the existing ground surface are already impervious bedrock. Any fill needed for construction would be removed from a berm just south of the visitor center site, created from fill placed in the 1960s. Several (less than 10) pinyon and juniper trees growing on the site would be transplanted outside of the building and parking area, though whether they would survive is uncertain. Areas adjacent to the new building and parking lot would experience minor increases in storm runoff and related soil erosion.

Approximately 29,000 square feet would be disturbed by construction of the new leach field. This area would continue to be permeable. Plants with thin roots (i.e. grasses and forbs, non-woody) would be allowed to grow on the leach field. The disturbance and the new water source (septic effluent) would make the site vulnerable to invasion by exotic plants such as Russian thistle (tumbleweed, *Salsola pestifer*). The new sewer line would be installed within the existing roadbed and next to an existing water line, and would re-excavate about 13,000 square feet of the previously-disturbed water line corridor. The leach field, sewer and water line corridor and adjacent areas may undergo minor increases in compaction, runoff and/or erosion.

HYDROLOGY/FLOODPLAINS/WETLANDS

Affected Environment

No perennial water sources, wetlands or floodplains occur on the site of the proposed construction. Because of the extensive bedrock at the surface, much of the precipitation that falls on the site runs off rather than being absorbed.

The existing wastewater treatment system serving the campground and residence area includes piping to a septic tank near the rim of Little Ruin Canyon, then over the rim of the canyon to a leach field on the canyon floor. This system overflowed in March 1999 and is at risk of overflowing again. In the interim until it can be replaced, it must be pumped quarterly and treated weekly with bacterial enzymes which accelerate the sewage decomposition process

Environmental Consequences, Alternative 1

Existing conditions would continue. This would include the continued risk of the wastewater system failing, with the potential that sewage could overflow onto the ground and create a health hazard.

Environmental Consequences, Alternative 2 (proposal)

The new building and pavement would increase the impervious surface at the site. This would cause some increase in storm runoff, though since part of the site is already impervious, the increase would be slight. Storm runoff would carry some automotive pollutants (oil, antifreeze etc.) that were deposited on the parking lot, but this runoff would not discharge directly to perennial streams.

The risk of sewage overflow and health hazards from the existing treatment system would be eliminated.

WILDLIFE

Affected Environment

Wildlife that may inhabit or use the project area include various small mammals, birds, and reptiles. The site is not particularly high value wildlife habitat and is already affected by proximity to a road and nearby human presence at the ranger station, housing area and campground.

Environmental Consequences, Alternative 1

Existing conditions would continue.

Environmental Consequences, Alternative 2 (proposal)

The new visitor center, parking lot, and leach field would affect approximately 2.4 acres of potential habitat. This would not have a significant impact on wildlife populations, because of the non-critical nature of the affected areas and the thousands of acres of this habitat type that remain available. Habitat would be eventually be restored at the site of the existing ranger station, after removal of the building and revegetation of the area (approximately 1 acre).

THREATENED AND ENDANGERED SPECIES

No state or federally-listed species of wildlife or vegetation, or designated critical habitat, occur on the site or would be impacted by the proposed alternative.

CULTURAL RESOURCES

Affected Environment

National Park Service archeologists systematically surveyed approximately 40 acres around the potential project location in 1998. The entire monument and surrounding area, including the leach field site, were surveyed by archeologists in 1974 through 1976. The surveys found a variety of archeological resources, but none on the sites of proposed construction. Several native American tribes have potential cultural ties to the Hovenweep landscape, and were consulted about the project (see Tribes and Agencies Consulted, below).

The existing ranger station was built in 1925 at Mesa Verde and moved to its present site in 1952, and has the appearance of being historic. However, it has lost its historic integrity, since it was moved from its original foundation, cut in half, and otherwise altered over the years. It is therefore not historically significant. The other building at the site of the ranger station is also not historically significant.

The existing ranger station, shed, and other modern features (cars in the parking lot, etc.) are visible from the ruins on the rim of Little Ruin Canyon, and intrude into the cultural landscape.

Environmental Consequences, Alternative 1

There would be no effect on cultural resources. The existing ranger station and other modern features would continue to intrude into the cultural landscape.

Environmental Consequences, Alternative 2 (proposal)

The proposed construction location avoids archeological sites. The new visitor center location would be farther from Little Ruin Canyon, where the most important cultural features (prehistoric Puebloan ruins) are located, and thus would have less of a visual impact on the cultural landscape than the existing ranger station. The non-historic existing buildings would be removed, eliminating this visual impact on the ruins. No ethnographic sites would be adversely affected by the construction.

Consultation is underway with the Utah State Historic Preservation Office about the proposal. All tribes with potential cultural ties to the landscape were consulted (see Tribes and Agencies Consulted, below). The Hopi tribe responded that removal of the existing buildings would be beneficial to the cultural landscape of the canyon. Several other tribes expressed continuing interest but no concerns, and several tribes have not responded.

VISUAL RESOURCES

Affected Environment

The existing ranger station and other 20th century buildings are visible and out of character with the ruins on the rim of Little Ruin Canyon, the primary features for which the monument was established.

Environmental Consequences, Alternative 1

Existing conditions would continue. The ranger station has a rustic appearance, which is appealing to some people. However, it would continue to be a visual impact on the ruins.

Environmental Consequences, Alternative 2 (proposal)

The new visitor center would be low in profile, with a maximum height of 13 feet. It would be stucco with a nearly flat gravel roof, both of which would be earth-tone colors to blend with the surrounding landscape. The building, parking lot and vehicles would be visible primarily from the access road and from short distances. The new structures would be shielded from the ruins by topography, vegetation and distance. The visual impact of the existing ranger station on the ruins would be eliminated.

VISITOR USE

Affected Environment

Hovenweep is currently an isolated monument with a rather low level of development compared to some national parks. This undeveloped character is appreciated by some visitors. However, the existing ranger station has limited space for visitors and interpretive exhibits, and becomes cramped with more than about eight visitors inside. The building has only one unisex bathroom for both visitors and staff. The physical condition of the building is deteriorating due to age and overuse. The existing parking lot, which holds about 20 cars, is presently full about 30 percent of the time, and use is increasing. The wastewater treatment system for the campground is at risk of failure at any time, which would necessitate closing the campground until the system could be repaired or replaced.

Environmental Consequences, Alternative 1

Existing conditions would continue.

Environmental Consequences, Alternative 2 (proposal)

Capacity of the visitor center and parking lot would be increased. More interpretive exhibits would be available. Visitors would experience a larger, more modern building than the current rustic ranger station. However, visitors could step out of this modern setting to experience the prehistoric ruins free of 20th century intrusions. Potential health hazards such as rodents and related hantavirus would be alleviated. The trail from the visitor center to the canyon rim would be accessible to people with some disabilities.

In recent years there has been an increase in the level of development and visitation at the park. Access roads to the monument have been paved, and two staff residences and one small telephone building have been built at the Square Tower unit. The proposed visitor center and parking area would replace an existing building and parking area, thus there would be a minor cumulative increase in the overall level of development at the monument.

PARK MANAGEMENT/OPERATIONS

Affected Environment

The existing ranger station has inadequate space for administrative functions, including office space and equipment storage, and does not meet accountability requirements for fee collection. The condition of the building is deteriorating, and repair would not be cost-effective. The septic system for the campground and staff residences is at risk of failure at any time.

Environmental Consequences, Alternative 1

Existing conditions would continue. Without significant repair, the ranger station would continue to deteriorate.

Environmental Consequences, Alternative 2

The visitor center would have adequate space for staff to operate effectively, and to store equipment needed for visitor services and resource protection. Potential health hazards such as deteriorating electrical wiring or rodents and related hantavirus would be alleviated.

CONCLUSIONS

To evaluate significance of effects, the Council on Environmental Quality regulations for implementing the National Environmental Policy Act (40 CFR 1500-1508) direct that both the context and the intensity of effects be considered. For both the beneficial effects and the adverse effects of the proposal, the geographic context is primarily local, limited to visitors and resources in the immediate area of the project. The temporal context for both beneficial and adverse impacts is long-term or permanent.

The following factors affect the evaluation of intensity or severity of effects:

- while there are both beneficial and adverse effects, the beneficial effects outweigh the adverse
- the proposal would have a beneficial effect on public health and safety
- the project would have a positive visual effect on the nearby prehistoric Puebloan ruins, the primary features for which Hovenweep National Monument was established
- the project would not negatively affect other rare or critical resources (threatened or endangered species, wetlands, floodplains, riparian areas, ecologically sensitive areas, or other cultural resources)
- the effects are not likely to be highly uncertain, or to involve unique or unknown risks
- the project does not establish a new precedent or represent a decision in principle on future actions
- while there would be a cumulative increase in the general level of development at the monument, there would be no other individually insignificant but cumulatively significant adverse impacts
- the project does not threaten to violate federal, state or local law or requirements imposed for the protection of the environment

This evaluation of context and intensity of effects leads to the conclusion that adverse impacts from the proposal will not be significant.

REFERENCES

Brunnemann, Eric. 1999. Assessment of Effect on Cultural Resources, Hovenweep Visitor Center. National Park Service, Southeast Utah Group.

AGENCIES AND TRIBES CONSULTED

Hopi
Navajo Nation
Paiute of Utah
Ute Mountain Ute
White Mesa Ute
Northern Ute
Acoma Pueblo
Cochiti Pueblo
Isleta Pueblo
Jemez Pueblo
Laguna Pueblo
Nambe Pueblo
Picuris Pueblo
Pojoaque Pueblo
Sandia Pueblo
San Felipe Pueblo
San Ildefonso Pueblo
San Juan Pueblo
Santa Ana Pueblo
Santa Clara Pueblo
Santo Domingo Pueblo
Taos Pueblo
Tesuque Pueblo
Zia Pueblo
Zuni Pueblo

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