

Dear Friends,

The National Park Service (NPS) is considering three preliminary concepts for treatment of the sandstone arch at the front of the Spruce Tree House (STH) cliff dwelling alcove at Mesa Verde National Park (MVNP).

In October 2015, in response to increasing rock falls, the park closed STH. Visitor counts prior to the closure of the site indicated that STH was visited by nearly half of all visitors to the park. The combination of continued rock falls from the arch face and underside and the questionable overall arch span stability compelled the park to conduct analyses of the arch for stability and safety. A thorough analysis has now been conducted to determine the unique engineering issues and requirements needed to complete stabilization design for the arch. Stabilization would not include any alteration of the cliff dwelling structures within the alcove. The stabilization design incorporates features and contractor requirements for protecting natural and cultural resources during construction.

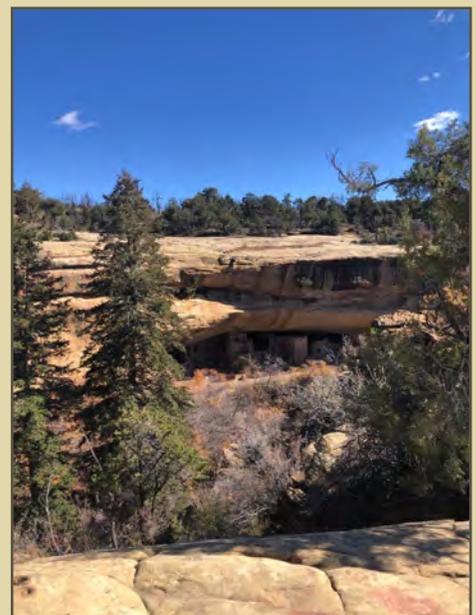
This newsletter includes information about the preliminary concepts being considered and the environment at MVNP that could be affected by this proposed project. At this time, we are initiating a 30-day comment period and invite you to participate in the planning process.

Your feedback is important to the NPS and we hope you will join us in this important discussion by submitting ideas and identifying issues of concern. We would like to hear your thoughts on the proposed stabilization design, preliminary alternative concepts, potential issues with park resources, and any other ideas you feel are relevant and important. Once we have received and considered your comments, we will move to the next phase, which will include assessing compliance needs under the National Environmental Policy Act (NEPA) and other environmental regulations.

Thank you for your interest and participation in the development of the Spruce Tree House Alcove Arch Stabilization Project.

Sincerely,

Kayci Cook Collins, Superintendent



History

MVNP was established in 1906 to preserve and protect the material culture of prehistoric humans that occupied the Mesa Verde cuesta. The prehistoric architecture, artifacts and landscapes that park is mandated to preserve are primarily associated with Ancestral Pueblo culture that occupied Mesa Verde and the Four Corners region from 500 to 1300 AD.

STH is one of many cliff dwellings and archaeological sites found in the park. It is the third largest cliff dwelling at MVNP, with 130 rooms and 8 kivas, and is one of the most visited sites. STH lies within a natural sandstone alcove measuring 216 feet in length with a depth of 89 feet. A free-standing natural sandstone arch sits above the cliff dwelling, slightly offset from the alcove behind it.

NPS noted sandstone degradation from the alcove roof and outer edge of the arch as early as 1908. Surface water would drain between the arch and alcove, flowing into the site below. Early archaeologists attempted to remedy this situation by blasting a trench in the sandstone above to deflect water to either side of the alcove. In 1962, the southern



half of the 270-foot sandstone arch was stabilized by installing rock-bolts to anchor the arch to the alcove behind it. The crack was again cleaned, plugged with burlap from below, and filled with concrete grout from the bottom to top. While effective for a time, the rock-bolts were not adequate for the stabilization effort and groundwater continued to be a problem. In 2015, a rockfall prompted a geotechnical engineering assessment of the alcove. Preliminary inspections indicated that stability of the arch was jeopardized; the 1962 treatments were at the end of their use-life, cracking along the arch had increased, and additional rock falls were possible.

Since 2015, the NPS has closed the site due to safety concerns and completed multiple studies of the arch to assess stability and identify stabilization options to prevent additional rock falls or collapse of the arch entirely.

Purpose and Need for Action

The purpose of the proposed action is to stabilize the STH Alcove Arch. Stabilization would be achieved through securing the overall arch as well as individual arch rock blocks. The park would also install geotechnical instrumentation to monitor the stability of the arch.

The action is needed to prevent collapse of the arch and resulting damage to Spruce Tree House cliff dwelling in adherence with the park's enabling legislation and NPS Management Policies.

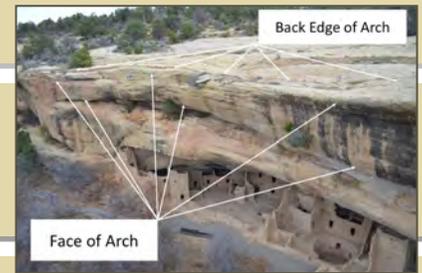
The NPS will conduct an analysis under the National Environmental Policy Act (NEPA), the National Historic Preservation Act (NHPA), and other environmental regulations to address potential environmental effects from the proposed action to stabilize the sandstone arch.



Preliminary Concepts

A preliminary range of concepts for treatment of the sandstone arch have been identified. These are described below.

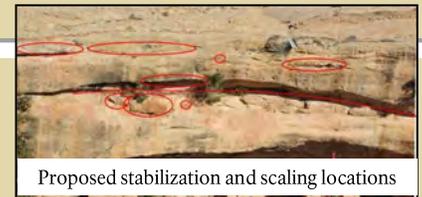
Current Conditions (Concept 1)—The STH Alcove Arch would not be stabilized. No instrumentation would be installed to monitor the stability of the arch, and the site would remain closed for safety concerns.



Stabilize Arch and Open Site (Concept 2)—The STH Alcove Arch would be stabilized through various methods, including: installation of rockbolts to stabilize the overall arch and rock blocks; treatment of the crack to remove groundwater between the arch and the alcove; removal of loose surface rocks, detached rock slabs, and vegetation; placement of reinforced concrete supports; and installation of geotechnical instrumentation to monitor arch stability. The stabilization would not include any alteration of the cliff dwelling structures within the alcove. Once stabilization measures were complete, the archeological site would be reopened to the public.



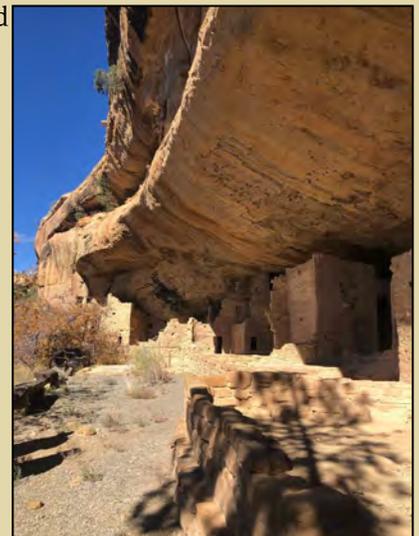
Stabilize Arch and Close Site (Concept 3)—The Spruce Tree House Alcove Arch would be stabilized in the manner described above and the site would remain closed to visitation by the public.



Park Resources that Could be Affected

The table below presents information on some of the resources that could be affected by the Spruce Tree House Alcove Arch Stabilization project.

Resource	Description
Visitor Use and Experience	The alcove is highly visible, and the area is frequented by park visitors who access the nearby 2.4-mile Petroglyph Point Trail. The alcove can be seen from the Chapin Mesa Archaeological Museum and surrounding amenities, which are popular visitor destinations.
Cultural Resources	Spruce Tree House is one of the best-preserved cliff dwelling and the third-largest site in the park, offering a high-quality interpretive experience.
Wildlife	The project area is home to abundant wildlife. The park's geographic isolation and its location in a geographic transition zone, help provide niches for this wide variety of animal species.
Vegetation	Native vegetation, including old growth pinyon-juniper woodland and Douglas fir forest, are present in the project area.
Geology and Water Resources	The project area is defined by unique geology such as natural arches and streambeds, as well as natural springs and seeps.
Special-Status Species	Chapin Mesa milkvetch (<i>Astragalus schmolliae</i>) occurs in the project area and is a candidate species under the Endangered Species Act.



Chapin Mesa Milkvetch

Timeframe and How to Comment

Following the close of the comment period, NPS will develop a set of alternatives for analysis under the National Environmental Policy Act (NEPA). NPS anticipates a NEPA document to be available to the public by Spring of 2022. Additional public engagement will occur at that time.

Public participation is an important element of the planning process, and we welcome your ideas, concerns, issues, suggestions, and potential topics for consideration. Please share your comments no later than Friday, **January 7th, 2022** online through the Planning, Environment, and Public Comment (PEPC) website at:

<http://parkplanning.nps.gov/MEVE>

Before individuals include their address, phone number, email address, or other personal identifying information in their comment, they should be aware that their entire comment, including their personal identifying information, may be made publicly available at any time. Individuals may request that the NPS withhold their name and/or address from public disclosure. If individuals wish to do this, they must state this prominently at the beginning of their comment and make such a request by checking the box "keep my contact information private." on the website. The NPS will honor such requests to the extent allowable by law, but individuals should be aware that NPS may still be required to disclose personal identifying information.

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