

## **Prehistoric Sites -- Elden Pueblo**

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**LOCATION:**

Just minutes from downtown Flagstaff, you will find Elden Pueblo on the west side of Hwy 89. It is tucked away behind the Ponderosa pine trees. The parking lot is located just south of the traffic light at the Camp Townsend-Winona Road.

**PUBLIC VISITATION:**

Located on National Forest land and is open year round. Self guided tour.

**SITE DESCRIPTION AND BACKGROUND:**

Elden pueblo is a large site in the Flagstaff area. At 50-60 rooms, it rivals it's more well-known contemporaries such as Wupatki and Walnut Canyon and was quite likely one of the main villages of the A.D.1150-1275 Sinagua (See-nah-wa) culture. It is situated atop an earlier pithouse village, one of hundreds that dot the Northern Arizona landscape. Elden pueblo is a large site in the Flagstaff area. At 50-60 rooms, it rivals it's more well-known contemporaries such as Wupatki and Walnut Canyon and was quite likely one of the main villages of the A.D.1150-1275 Sinagua (See-nah-wa) culture. It is situated atop an earlier pithouse village, one of hundreds that dot the Northern Arizona landscape.

In 1926 Dr., Jesse Walter Fewkes, a famous archaeologist with the Smithsonian Institution in Washington DC, excavated and stabilized portions of Elden Pueblo. He hoped to turn the site into a national monument when work was completed. Plans for the monument fell through, but that did not stop people from visiting the site and sharing in its excitement. This enthusiasm continued over the years with archaeologists, students, and volunteers all became partners in interpreting the past at Elden Pueblo.

Elden Pueblo received the Governor's Commendation for Achievement in Historic Preservation in 1983, and the National Trust for Historic Preservation Award in 1984. The site is featured regularly in newspaper and magazine articles and is visited by hundreds of local and tourists yearly. Elden Pueblo is the focus of many site tours conducted by the Forest Service, Museum of Northern Arizona, and is highlighted during Arizona Archaeology Week. Since 1991 it has been part of the nationally recognized Forest Service Passport in Time program. AAS has held an annual field school at this site for several years.

**STABILIZATION HISTORY AT ELDEN:**

Stabilization at Elden Pueblo has a long history. Dr. Jesse Walter Fewkes, the first excavator, was also an advocate of public archaeology. He felt that the public should be informed of the work done by archaeologists and to that end he was instrumental in the formation of several National Monuments, Wupatki, Walnut Canyon, and Mesa Verde. Elden Pueblo failed to get the recognition he sought, but, after his excavations, the place was ready to receive visitors. He had the walls stabilized, trails constructed, and signs erected. His 1927 photos, showing the pueblo, tourists and the American flag are still used today. Besides being a wonderful historical component to the public

presentation of Elden Pueblo, they also reveal details of the walls as Fewkes found them, details that have been lost due to the deterioration of the pueblo since Fewkes' time.

Stabilization for public purposes is a trade-off. While it may enhance the visitor experience, it necessitates constant maintenance. But then so did living there. By far the easiest and most stable treatment is to backfill all excavations, returning the site to its pre-excavation condition. The other extreme is to reconstruct the site using modern methods and materials with only a prehistoric veneer. The compromise we have chosen at Elden Pueblo was developed from the successes and failures of the past combined with a nearly zero budget. The most notable failure is the use of concrete. We found that it did not adhere to the rocks and it did not break down within any reasonable time-frame. Fewkes' concrete still litters the site, and while it is a useful stratigraphic marker, it adds a notably historic aspect to the prehistoric site. We use several formulas of soil-cement which have the property of turning to dust after 10-15 years.

Using the old Fewkes photos, we can, in some cases, find the exact rocks that were used in the original construction. Usually, though, all we can do is to use the proper size rock in the proper area. Using the old photos we have also discovered two vent tunnels that had not been previously recognized. In fact, Fewkes went so far as to cement them over, probably figuring them to be nothing more than rodent holes in otherwise intact walls.

The Elden Stabilization Project has been in effect for the last six years. And this is probably the first time we have used that name. ESP? To those of us involved, it is just 'Sunday'. From May 'til October we meet at the pueblo, on Sundays, and do what has to be done. The first few years were almost completely stabilization and reconstruction. 1999 and 2000 found us spending the majority of our time excavating in advance of the stabilization. The information we have gleaned from the excavations has confirmed some of the previous theories of pueblo growth and development and has opened some new avenues of speculation.

We marvel at how Fewkes could excavate AND stabilize the entire exterior of the pueblo in just two years. We have spent six years on the east side and are not done yet.

Elden Pueblo is constructed of the local volcanic dacite rocks, without modification. As a general rule, the largest rocks are at the base of a wall. We spent an inordinate amount of time, in the beginning, trying to lay even courses, so that the wall would be easy for the next course to build on. Lately, though, we are using the 'next rock' theory, i.e. 'gimme that next rock.' We found that both methods were resulting in the same difficulty for the next course, but that the 'next rock' method was faster and the resulting wall more nearly matched the few prehistoric walls we have to study.

Foundations are the most important aspect of any wall. Through careful excavation we discovered how the prehistoric foundations were made. Generally, if a soft spot was encountered, it was dug out and replaced with rocks so that there was a continuous load bearer between the substrate and the visible basal course. We have though, on occasion, used a piece or two of steel to carry any load over a soft spot we wish to preserve.

Stabilization is as much about preservation as exposure. We can't make everything visible or accessible to the public. A wall is an artifact as much as any potsherd and where intact sections are found, every effort to conserve them must be taken.

In addition to working on a single room or room block, we usually make a circuit or two around the pueblo, patching here and there, as needed, so that not all the work involves lifting lots of rocks. Building a wall is strenuous but the results are worth it.

Jim Britton had a discussion with Tom Woodall and Walter Gosart while visiting Elden on August 12, 2001.

Tom Woodall, Walter Gosart and Celia LaFave usually spend their Sundays doing volunteer stabilization work at Elden. They have been doing this for several years and continue doing it today.

During my recent visit, Walter discussed their soil-cement formulas and described when each mix is used. When relaying or reconstructing foundations and basal courses, they use 5 soil to 1 cement. For other courses they use a 6 soil to 1 cement mix. To fill any internal wall voids they make a slurry composed of 8 soil to 1 cement and then pour it onto the wall and let it fill any voids. When the wall is at the desired height, they mix an unamended mud and apply it as the final cap. This makes the wall top more natural looking. This final cap will wear or erode off and needs to be replaced periodically.



Stabilized and reconstructed rooms along the south end of the pueblo looking east.



Room 9 being excavated in 1989. This room has now been stabilized and partially reconstructed.

#### RECENT STABILIZATION ACTIVITY AT ELDEN:

This year we hosted an AAS Stabilization and Reconstruction Field School. The report on that is on file with the Certification Department of the AAS.

Before we got started with the Field School it was suggested that one of the projects for the field school could be a Condition Assessment of the entire pueblo.

Well, that didn't happen. We did eventually complete that project and found there were 160 walls now standing at Elden Pueblo. The 2005 AAS Field School managed to stabilize and document 8 walls.

The Condition Assessment involved completing an assessment form and photographing each wall. Each standing wall was divided into three parts, the base, the mid-wall, and the top. Each part was carefully examined for signs of erosion and other typical impacts. All these were noted and the overall wall was assigned a rating, Collapsed, Poor, Fair, or Good. This information will determine future work needs, assess past work quality, and aid in a comprehensive preservation plan to ensure the continued viability of the site as a visitor destination. (That's me speaking as an NPS employee.)





This is a photo of Room 1, south interior after stabilization has been completed this year. This work was an emergency project due to the collapse of the wall after re-excavation in 2002.



This is a picture half way through the Room 1 project.

Another reason to stabilize this now was that the AAS Field School was excavating the other side of this wall and needed some stability for their project.

Stabilization is such an integral part of the Elden Pueblo Project that we are often pulled away from where we would really like to go to make something OSHA safe for a Field school or to stabilize something newly exposed and very fragile.

Sometimes the archeology seems to get in the way.



This is the north wall of room 1 and it needs serious stabilization. It appears to be a dividing wall, one course thick, maybe two courses in some spots. A simple job apparently. Then we realized we didn't know the floor relationship of room 1 to room 2, the room just to the north. While we were determining that, we discovered some under-wall features that might pre-date both rooms. Or not. This little project is now on hold until spring, 2006. We need to think about this some more.

Anyway, out of the 160 walls now standing, about half have been reconstructed since 1996. Only three or four walls are still standing from 1926 when Dr. Fewkes used concrete to stabilize the walls he found.

The best part of Dr. Fewkes' work is the photographs he left. We identified a possible exterior doorway from one of his photos during the AAS Stab/Recon field School. It happened that we were working right there and were using the old photo as a teaching tool to emphasize the importance of documentation in stabilization. The possible doorway just jumped right out. I could say I planned it that way but I didn't.





We didn't work here this year. I just think it's a nice picture. This part of the pueblo was stabilized and reconstructed in 1995-6 during the last Stab/Recon Field School.