



# NATIONAL CONSERVATION LANDS

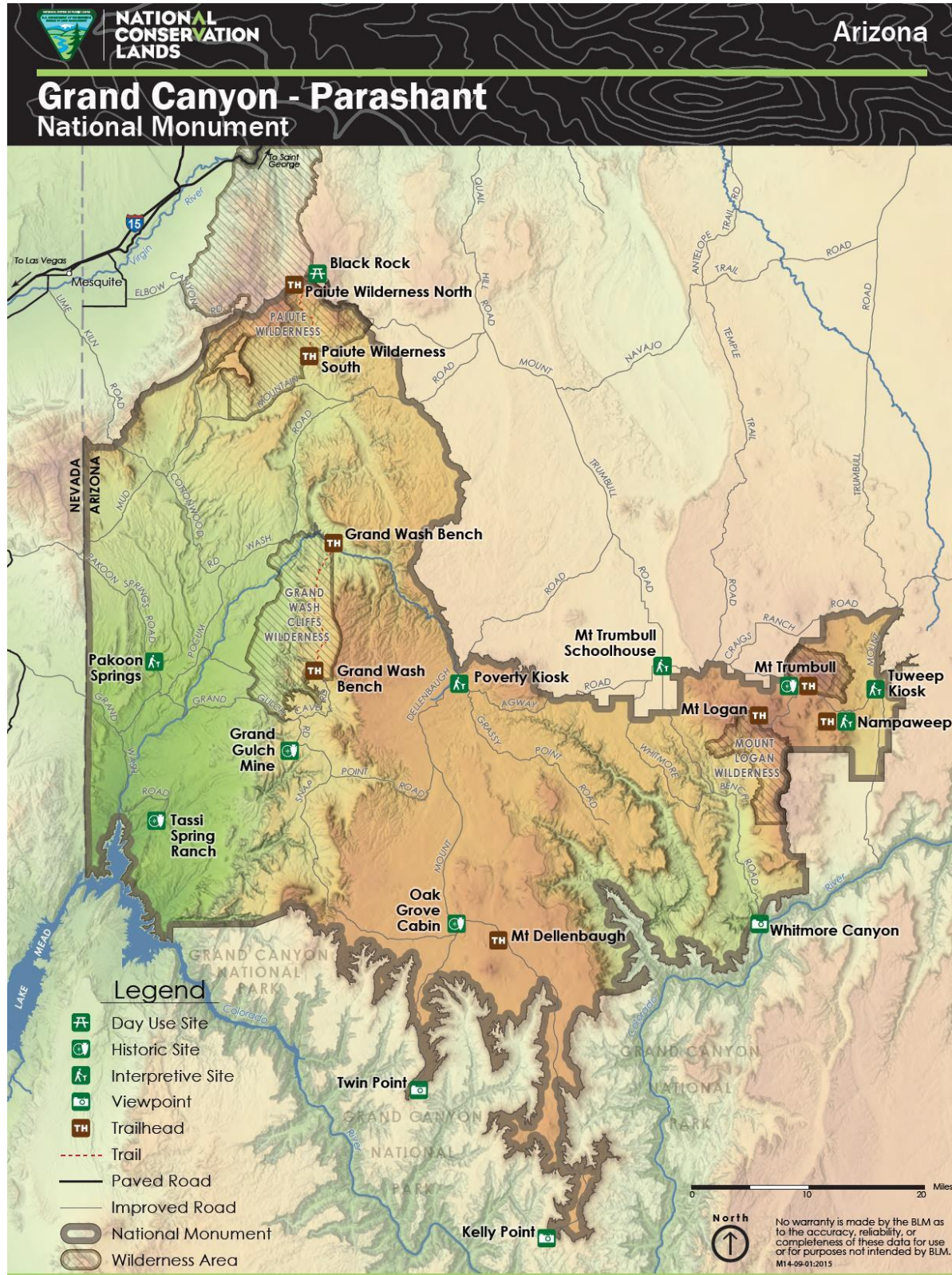
Arizona  
2021: Annual Monument Report

# Grand Canyon-Parashant National Monument





# Map





## Accomplishments

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The Grand Canyon-Parashant National Monument (Parashant or Monument) staff were able to complete several projects to improve Monument conditions. The largest of these was the Shivwits Plateau Landscape Restoration Project (Shivwits) Environmental Assessment (EA). The Shivwits EA authorizes up to 55,000 acres of vegetation treatment in ponderosa pine, pinyon/juniper, and sagebrush areas. Two grazing permit renewals for the Imlay-Sullivan Tank and Dripping Springs Allotments adjacent to the Shivwits EA project area were completed as well.

An EA was completed to address the aging Oak Grove Administrative Site and related infrastructure. During the summer, the Poverty Administrative Site was removed and rebuilt. Both sites will serve as important field operation locations for Monument staff, state agencies, and researchers.

In addition, contracting was completed to install new vault toilets at Tassi Ranch, Nampaweap Petroglyph Site, and the Grand Gulch Mine Airstrip. Other accomplishments include completing work pursuant to reintroducing relict leopard frogs at Pakoon Springs, administering research permits, and completing special recreation permits.



**Figure 1.** Feral burro family grouping near Pakoon Springs.

## Challenges

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Challenges across the Monument have included drought conditions, rough roads, and the complexity of interagency coordination of limited resources. Wildfire conditions were of concern with extremely dry conditions and the cumulative impacts from on-going drought. Two larger wildfires occurred on the Monument in the summer months. The first fire was in late June, with the lightning-caused Andrus Canyon Fire, which burned approximately 1,633 acres, on National Park Service (NPS)-managed lands. Later in the summer, the Snap Point Fire grew to 9,643 acres during extremely hot conditions with temperatures over 115° F.



Figure 2. Redbud tree blooming in the aptly named Red Pockets area.



## Visitors

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Monument visitation increased in 2021, with an estimated 77,000 visitors. The estimate is based on a constellation of traffic counters across the Monument. These estimates were used to calculate 109,416 visitor days. Recreation staff have begun discussions about pursuing new technologies that will gather more detailed data about visitor demographics and activities. Many visitors are public land permittees either through the grazing program or recreation. Solo hunters and/or guides are also counted as visitors.

Abandoned mineral lands (AML) consisting of 6 mines were surveyed to address visitor safety. The assessment accounted for ease of public access, wildlife usage, active hazards such as vertical falls or confined spaces, and latent hazards such as exposure to heavy metals or radioactivity. The assessment clarified where visitor signage was necessary and where wildlife-friendly mine gates could be implemented.



**Figure 3. The International Dark-Sky Association recognized star-studded night sky near Mt. Dellenbaugh.**

## Partnerships

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Several partners worked with Monument staff during 2021. The Monument has long been associated with Southern Utah University's Intergovernmental Internship Cooperative (IIC). The IIC receives funding from federal agencies in the area through assistantship agreements to support internships on the Monument. In 2021, 7 interns worked on the Monument across law enforcement, range, ecology, and recreation programs. Funding for tribal youth internships through IIC was arranged in 2021 for work to begin in spring of 2022.

Historically, the Monument has hosted the Yevingkarere Southern Paiute Youth Camp, at Mt. Trumbull, part of the tribes' ancestral homelands. The youth, ages 10-12, are taught traditional ecological and cultural knowledge by tribal elders. In 2020 and 2021, camps were planned collaboratively with tribal leaders, but due to the pandemic had to be cancelled to protect tribal elders. A close partnership with Southern Paiute tribes continues to help the Monument staff with projects that may affect tribal interests. Through consultations on various National Environmental Policy Act (NEPA) projects, Monument staff were able to ensure that tribal concerns are heard, and that project implementation includes mitigating measures to protect tribal sacred sites.

The Public Lands Information Center (PLIC) in St. George, Utah is an interagency visitor center that provides recreation information about federal, state, and local public lands in southwest Utah and northwest Arizona (AZ) and where the public gets permits for activities on BLM and U.S. Forest Service (USFS) lands for mineral collection and forest products. The PLIC had historically been run by the BLM AZ Strip District Office and a non-profit cooperating association. In 2021, a Memorandum of Understanding tasked the NPS, BLM, and USFS to work cooperatively to manage the center. Direct oversight was given to the NPS.

Other partnerships with the American Conservation Experience and the Great Basin Institute involved setting up agreements and contracts for vegetation work at Tassi Ranch and Pakoon Springs in the coming year. A contract was signed with the AZ Game and Fish Department (AGFD) to verify eradication of invasive American bullfrog in the Pakoon Basin using environmental DNA. This work will continue the long-term partnership between AGFD and the BLM to rehabilitate Pakoon Springs and preserve the rare relict leopard frog.

## Science

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During the latter part of FY20 and early FY21, a 12-week paleontological survey was completed by GeoCorp interns and volunteer PhD geologist researchers. Work took place across the Monument, with focused areas on the lower portions of Parashant Canyon, Frog Springs, Tuweep Valley, Pakoon Basin, and Mt. Logan. Noteworthy fossils were found in an unmapped unit of Pakoon Limestone which is typically only found along the Pakoon basin but is exposed in other locations. In addition, a trilobite-like trackway also garnered further interest from NPS paleontologists, generating a formal photogrammetry NPS Technical Assistance Request scheduled for FY22.

In partnership with the NPS Mojave Desert Inventory and Monitoring Network (MOJN), long-term monitoring of water quality continued at one large spring and water quantity at five springs. Vegetation crews continued to select and field-verify sites for the MOJN long-term monitoring of sagebrush areas across the Monument. Protocol implementation was slowed by COVID-19 related restrictions on the handling of bats; however, the MOJN-Parashant bat acoustic monitoring program was able to sample at 12 sites. Data and protocols for these projects are available at [irma.nps.gov/DataStore/](https://irma.nps.gov/DataStore/).



Figure 4. Marine fossils found during the paleontology survey.

## Climate Impacts

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Drought conditions persisted from 2020 into 2021, although later summer and early fall monsoonal moisture brought some relief. Fuel conditions during the summer allowed for wildfires to ignite from relatively dry thunderstorms. Perennial vegetation experienced drought-related impacts with many juniper trees showing drought stress. Future monitoring will tell if drought induced mortality occurred.

Rangeland trend monitoring indicated that many grasses and forbs did not grow or put forth seed during the summer months. Later, into the late summer and fall, monsoonal moisture allowed for re-growth, showing the resiliency of drought-tolerant species. Livestock operators, for the most part, reduced their herds accordingly to compensate for the lack of forage. Cumulative drought impacts may be felt into the next growing season, pending winter and spring conditions.



Figure 5. Fire in pinyon-juniper woodland rim cliffs.



## Events

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Several events were permitted amid COVID-19 restrictions, with limited attendance. As part of the 4<sup>th</sup> Annual Southwest Astronomy Festival, Junior Ranger night was held on September 10, 2021, in partnership with the Tonaquint Park staff in St. George, Utah. Monument staff and volunteers conducted five other astronomy events, including star parties, photography, and painting sessions during the festival. Other parks and partners also sent representatives from state and federal agencies.

National Public Lands Day was held on September 24, 2021. Monument staff worked to install a wayside display along the Temple Trail at the Mt. Trumbull trailhead and performed trail maintenance along a short section of the Temple Trail.



Figure 6. Junior Ranger Night 2021 at Tonaquint Park.



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## **Grand Canyon Parashant National Monument**

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