

# Pinyon Plain Uranium Mine Threatens Grand Canyon!

## *Water, Wildlife, and Cultural Resources At Risk*



Pinyon Plain (formerly Canyon) Mine, located on the Kaibab National Forest seven miles south of Grand Canyon National Park on traditional lands of the Havasupai Tribe, has been the subject of extensive protests and lawsuits. Scientists, activists, the Havasupai Tribe, and others are concerned with potential uranium mining impacts on regional groundwater, seeps and creeks, wildlife, and cultural values.

### ***History***

The mine was originally approved in 1986. Above-ground infrastructure was built in the early 1990s, but a crash in uranium prices caused the mine's closure in 1992 before the shaft or ore bodies could be excavated.

Originally owned by Energy Fuels Nuclear, the mine was purchased by Denison Mines in 1997. In 2012, Energy Fuels Resources, Inc. purchased the mine and obtained approval from the Forest Service to resume operations. Unfortunately, it was allowed to move forward based on outdated information and plans, posing significant threats to local resources and to the people and wildlife who depend on them. It has yet to produce any ore.

Also in 2012 began a 20-year moratorium on new mines and new mining claims on one million acres of public lands surrounding Grand Canyon, but Pinyon Plain Mine is being considered a "valid existing right" that preceded the mining ban. It is therefore being allowed to operate during the moratorium.

### ***Threats***

Pinyon Plain Mine compromises cultural values, threatens wildlife, increases the risk of soil and water pollution, and intensifies depletion of groundwater that feeds springs and wells in and near Grand Canyon.

In late 2016, Pinyon Plain Mine intercepted an aquifer and began flooding with water. Mine operators pump the contaminated water out of the ground, store it in a pond and tanks onsite, and spray it in the air to evaporate it. Wildlife drink, forage, and bathe in the pond. Little is known about groundwater in the region; groundwater threatened by the mine could feed municipal wells and seeps and springs in Grand Canyon, including Havasu Springs and Havasu Creek. **There is no way to clean up groundwater once it is contaminated with uranium.**



**The proposed mine is located within the boundaries of the Red Butte Traditional Cultural Property, which the Forest Service designated in 2010 for its critical religious and cultural importance to several tribes, especially Havasupai.** As a "Traditional Cultural Property," Red Butte is eligible for inclusion on the National Register of Historic Places.

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The mine has not been required to update its 1984 Plan of Operations nor to perform an environmental assessment or supplemental review to reflect the extensive changed circumstances since the original review and approval. These changes include the 2010 designation of the Red Butte Traditional Cultural Property, reintroduction of the endangered California condor in the vicinity of Pinyon Plain Mine, improved groundwater modeling, and the Department of the Interior's 2012 decision to ban new uranium mining across one million acres near Grand Canyon.



### ***What's Being Done?***

The Havasupai Tribe and three conservation groups sued the U.S. Forest Service over its decision to allow Energy Fuels Resources, Inc., to begin operating Pinyon Plain Mine without initiating or completing formal tribal consultations and without updating an outdated 1986 federal environmental review. The lawsuit alleged violations of environmental, mining, public land, and historic preservation laws and asserted that the Forest Service violated the National Historic Preservation Act by failing to consult with interested tribes to determine how adverse impacts on Red Butte could be avoided or mitigated. Unfortunately, in December 2017, the Ninth Circuit Court of Appeals rejected the challenge to Pinyon Plain Mine, but later allowed review of one aspect of the decision relating to the economics of the mine. That aspect is currently being litigated.

We continue to work with partners to force mine closure. The Arizona Department of Environmental Quality (ADEQ) is proposing an "individual" Aquifer Protection Permit for Pinyon Plain Mine versus a general permit previously allowed. Since ADEQ cannot guarantee groundwater protection, we are asking that it permit closure of the mine and increase groundwater monitoring capability.

### **Pinyon Plain Mine Threatens Water, Wildlife, and Cultural Resources:**

- Groundwater below the mine site is hydrologically connected to Grand Canyon's seeps and springs, all hotspots of biodiversity, essential to wildlife and humans. Seeps and springs will be threatened with depletion, decreased flows, and contamination. Research published in 2020 identified a hydrologic connection between the shallow aquifer that is in contact with the mine and the deeper aquifer that supports Grand Canyon's largest springs.
- Pinyon Plain Mine's water containment pond is attracting wildlife. Western spadefoot (*Spea multiplicata*) tadpoles in the pond contain toxic levels of arsenic and selenium; there is evidence they are bioaccumulating uranium and other heavy metals.
- Pinyon Plain Mine is within Red Butte Traditional Cultural Property, which wasn't officially recognized by the U.S. government when the 1986 Record of Decision was issued. Sufficient tribal consultation had not occurred prior to the 1986 Record of Decision.
- A 2013 U.S. Geological Survey (USGS) study found soil contamination at all sites that had been previously mined around Grand Canyon, even sites that were "reclaimed." A 2017 USGS report noted that wind is transporting dust contaminated with uranium and heavy metals into the forest beyond the mine perimeter.
- A large mammal wildlife corridor used by mule deer, mountain lion, and pronghorn passes through the mine site, from Grand Canyon's South Rim to the San Francisco Peaks outside Flagstaff.

