

## **Uranium Mining Near the Grand Canyon**

### **AWF Position Paper and Fact Sheet**

#### **Overarching message:**

The risks from uranium mining near the Grand Canyon are too great and the benefits are very limited. The area around the Grand Canyon is simply not the place to mine for uranium.

The 20-year ban on new uranium mining confirms what local elected officials, sportsmen, conservationists, American Indian tribes, and business owners have been saying for years: uranium mining doesn't belong near the Grand Canyon. Today, we want to re-affirm our support of the mineral withdrawal because we believe it protects and preserves a national treasure, our water supply, local economies, thousands of jobs, and world-class hunting and outdoor recreation in northern Arizona.

The Grand Canyon is an irreplaceable natural treasure. Its stunning vistas, ancient geology, and winding Colorado River are world renowned — drawing over 5.5 million visitors to the park each year. Moreover, more than 40 million people and 4 million acres of farmland depend on the Colorado River for clean, safe water.

Yet, irresponsibly operated uranium mines located on federal public land just miles from the North and South Rims threaten to permanently pollute the Grand Canyon landscape and the greater Colorado River.

Few people realize how close they are to an active uranium mine when they visit Grand Canyon National Park. Located only six miles south of Grand Canyon Village, Canyon Mine sits within an area of religious and cultural importance to tribes like the Havasupai. The mine is located above groundwater that supplies some of Grand Canyon's most treasured seeps and springs, including Havasu Springs and Havasu Creek and right in the middle of a part of northern Arizona that is well known for world class hunting and outdoor recreation opportunities unique to the region.

In 2012, the Secretary of the Interior issued a 20-year ban on new uranium claims on more than a million acres of public lands adjacent to the Grand Canyon. That mining withdrawal is currently being challenged as mining companies attempt to lobby Secretary of the Interior Ryan Zinke to reverse the ban on new mining.

The 2012 mining withdrawal was thoroughly and publicly vetted and overwhelmingly supported by local citizens, hunters and anglers, community leaders and state and federal politicians. The support was non-partisan and very broad based, and thus very different from other issues like national monument designations.

There is simply no place for Uranium mining near the Grand Canyon.



### By the numbers:

- 831...Uranium claims that are potentially viable within the Withdrawn area.
- 15...Springs that have uranium concentrations that exceed EPA's standards for safe drinking water.
- 4...Uranium mines on the North and South Rims currently in various stages of operation.
- 40 million...People who depend on the Colorado River for clean, safe drinking water.

### Economic Impact:

With the Grand Canyon at the center of Arizona's outdoor-recreation industry, this decision protects the Colorado River and Arizona's economy. Grand Canyon National Park itself supports 12,000 jobs and fuels \$680 million into northern Arizona's local economies every year. Outdoor recreation in northern Arizona provides 18,000 jobs and contributes \$160M in state and local taxes. Hunting, fishing, and wildlife watching in Arizona contribute \$2.2 billion to the state economy annually.

In stark contrast, Canyon mine is expected to employ 60 people at full operation and in 2014 there were less than 200 total mining jobs across northern Arizona. Further, ***uranium mines are governed by the 1872 Mining Act which means they pay \$0 in royalties to the benefit of local, state or federal budgets.***

Keeping the Colorado River healthy ensures local economies will continue to thrive with a robust multi-billion-dollar tourism and recreation industry and a 20-year ban on new uranium mining is a smart move to protect the Colorado River, public lands, thousands of jobs and the economic future of the West.

Protecting the Grand Canyon is good business. New uranium mining is a risk we simply can't afford to take.

### Environment, Plants and Animals:

Beyond the raw numbers, the Grand Canyon and the Colorado River connect us with our history and to the land. Some things are simply priceless, like preserving the cultural, historic, and hunting and fishing traditions thousands have enjoyed here for generations.

Water is scarce in the desert, and collecting ponds filled with contaminated mine water tempt wildlife with poisonous, radioactive water. Unsuspecting birds, small mammals, and insects drink from the ponds, which have dissolved uranium concentrations up to 80 times the safe drinking water standards. During an inspection of the Kanab North mine site, a 2-foot gap beneath the fence showed Bighorn sheep tracks.

The web of seeps and springs typical to the region is not well understood, other than the fundamental truth that water flows downhill. Mine operators of Pinenut mine in 2009, and Canyon mine in 2016 assured the BLM their mines were dry, yet each flooded, ultimately contaminating millions of gallons of water. It stands to reason that if we don't know where the water is coming from, we also don't know where it's going. This means ***any contamination from within the fenced area of mine operations will eventually find its way to a place that the flora and fauna of the area depend on*** and that any significant contamination event has the risk of impacting the watershed far beyond the boundaries of the mine operations.

The Grand Canyon area and Kaibab plateau is a fragile ecosystem and uranium mining in this area presents an unnecessary risk.

### **Health & Safety:**

Studies of the Grand Canyon's uranium mine sites reveal an alarming pattern of radiological contamination. In 2010, the USGS found radioactive dust at more than 10 times the background concentration more than 300 meters beyond the fenced portion of the Kanab North Mine Site.

In 2010, the USGS reported that 15 springs and five wells near uranium mines in Grand Canyon watersheds have dissolved uranium concentrations that exceed drinking water standards. ***Currently, there are no regulations requiring long-term groundwater monitoring below uranium mine sites.***

Uranium hauling puts not just the area immediately around the mine at risk, but the path of the transport at risk also. Most uranium ore mined in this area is likely to be processed at the White Mesa Mill near Blanding, Utah and will travel through dozens of small communities including Williams, Flagstaff, Cameron, Tuba City, Kayenta and Bluff. In 2010 the ***USGS found above normal levels of radioactive dust on a similar haul route 20-years after the mining had stopped.***

New methods of mining likely lower the risk of contamination, but the risk remains and the extent of the impact is not fully known, particularly in terms of how any contaminant may migrate through the complex and little understood web of springs and seeps typical to the region.

With the mineral withdrawal, the 40 million people who depend on the Colorado River for drinking water can rest assured that our water supplies will be protected from the pollution risks of uranium mining.

### **Clean-up and Monitoring:**

Mine clean-up is costly and often litigious. Mines that get played out or are unprofitable are often abandoned and insolvent owners leave the taxpayers with the bill. Even well managed mines operated with legal practices require clean-up as they reach the end of their useful life.

***There are over 500 abandoned uranium mines on the Navajo Nation alone,*** and in 2008 the EPA and the U.S. Army Corps of Engineers found 38 of 226 water sources (17 percent) with uranium radionuclides at levels above maximum contaminant levels.

In 2017, the EPA agreed to pay \$600 million to clean up 94 uranium mines. Clean-up of the Orphan Mine on the south rim of Grand Canyon National Park has already cost \$15 million and is not complete. ***The total bill to the U.S. taxpayer for uranium mine clean-up is already well over \$1 billion*** with many hundreds of millions of dollars still on the horizon.

Reclamation plans are now required for new mines, but ***companies are not required to post a bond to cover future clean-up costs and mines can be put on standby for decades with no mandated deadline for reclamation,*** or worse can resume mining under old operating standards with outdated environmental reviews that no longer reflect current science.

The Pinenut Mine sat on standby from 1989 until 2009. 1,500 tons of uranium ore were stored on site during the two-decade standby period and when testing was finally done in 2015, tests showed contaminated soils 2-3 times higher than background radiation around the mine site. When the company attempted to reopen the mine, they also **discovered 2.85 million gallons of contaminated water in the mineshaft**. Since monitoring wells aren't required, **where the water came from, how long it sat there, or where it may have migrated underground, is unknown**.

Appropriate plans for monitoring and clean up are necessary even with well managed mines. The current 20-year moratorium should be used to update outdated monitoring and clean-up policies based on the most current science and with appropriate economic incentives that consider risks to habitat, wildlife and the watershed. Until updated monitoring and mine clean-up policies are in place it is irresponsible to re-open the area to new mining.

#### **Uranium Supply and Mine Ownership:**

The Uranium market is a worldwide market. Over 50 countries produce Uranium and 15 countries produce more than the U.S. Australia is by far the largest producer, followed by Kazakhstan and Canada. The U.S. imports almost 90% of its uranium. Most of that comes from friendly trading partners like Canada where uranium ore purities are 20x higher than northern Arizona.

Based on geologic studies from the USGS, the total reported reserves for all of northern Arizona are currently less than 2% of the total U.S. reserves. This means that even **a relatively large increase in the amount of uranium sourced from northern Arizona would have an insignificant impact on the overall market** and the amount of uranium sourced domestically.

**Over 90% of Uranium mines in the U.S. are owned by foreign companies** who operate as subsidiaries in the U.S.

#### **It Really Comes Down to Risks vs. Benefits:**

When you weigh the benefits (the jobs, the contribution to state local and federal revenue, and the incremental uranium supply) against the risks (human safety, clean water, healthy wildlife, and long-term clean-up costs), **mining around the Grand Canyon simply makes no sense**.