GRAND CANYON RIVER GUIDES

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November 17, 2017

Secretary Ryan Zinke
U.S. Department of Interior
1849 C St., N.W.
Washington, DC 20240

Secretary Sonny Perdue
U.S. Department of Agriculture
1400 Independence Ave., S.W.
Washington, DC 20250

Re: *Protect Grand Canyon* – no modification to Public Land Order 7787

Dear Secretaries Zinke and Perdue,

Grand Canyon River Guides, Inc., (GCRG) founded in 1988, is unique in that it provides a unified voice for river guides and river runners in defense of the Colorado River through Grand Canyon. Our non-profit educational and environmental 501(c)(3) organization is comprised of over 1,700 individuals who are passionately dedicated to the continuing preservation of this national icon. Consequently, Grand Canyon River Guides' goals are to:

Protect the Grand Canyon
Provide the best possible river experience
Set the highest standards for the guiding profession
Celebrate the unique spirit of the river community

As a longstanding Colorado River stakeholder and Grand Canyon defender, Grand Canyon River Guides strongly urges you to fully retain (unmodified) Public Land Order 7787, the 2012 Department of the Interior order that temporarily banned new uranium mines on over one million acres of public and national forest lands surrounding Grand Canyon National Park for a period of 20 years. It is our belief that the uranium mining moratorium provides a minimal

level of protection for the lands surrounding the Grand Canyon, which while acceptable as a starting point, will necessarily become much broader in scope as the American public, the scientific community, and land management agencies continue to consider the serious and long term consequences of further uranium mining on the doorstep of this World Heritage Site.

Based on recent studies and our own intimate experience, understanding, and respect of the Canyon and surrounding region, we contend that *the EIS which supported Secretary Salazar's decision to implement the uranium ban in 2012 was robust, and the Preferred Alternative was enthusiastically supported by the American public (in fact, hundreds of thousands of comments were received, most in support of the moratorium). Furthermore, we contend that the analysis and the subsequent decision for a 20-year ban remain valid for the following reasons*:

Science *must* inform policy

The impetus for Secretary Salazar's decision to remove these lands from additional uranium mining development until the year 2032 stemmed from significant uncertainties regarding the effects of uranium mining on the Grand Canyon, its people, wildlife, and water resources - precious springs, seeps, and the Colorado River itself, the lifeblood of the American Southwest. *Those uncertainties and gaps in knowledge still exist.* The US Geological Survey has been tasked with answering those questions and their results will help inform any decision to continue, modify or end the withdrawal in 2032. To recommend that Public Land Order 7787 be revised or rescinded at this juncture is incredibly premature, and of unknown risk.

A toxic legacy

The legacy of uranium mining in the southwestern United States is one of contamination, with immediate evidence in the Grand Canyon itself and the surrounding region:

- The Orphan Mine's drainage into the Redwall aquifer and Horn Creek (Note: A study in the 1990s by UNLV researchers put uranium levels in Horn Creek during floods at three times the level allowed for drinking, under federal drinking water standards)[1]
- Hack Canyon Mine's tailings pile flash flooding into Kanab Creek.
- The Church Rock Mine tailing pond's breach into the Little Colorado River.
- Grand Canyon National Park's own website indicates that, "Streams where radionuclides have been found include the LCR, the Paria River, Havasu, Kanab and Lava Chuar creeks, and Pumpkin Springs….Drinking and bathing in these waters is not advisable."[2]
- A 2010 report by the U.S. Geological Survey which indicated that fifteen springs and five wells in the region contain concentrations of dissolved uranium that exceed the U.S.

[1] Fitzgerald, James, 1996. Residence Time of Groundwater Issuing from the South Rim Aquifer in the Eastern Grand Canyon, Masters Thesis, University of Nevada, Las Vegas, Department of Geoscience.

[2] http://www.nps.gov/grca/learn/nature/waterquality.htm

Environmental Protection Agency maximum contaminant level for drinking water and are *related to mining processes*. (Emphasis, ours,)[3]

- That same USGS report also makes clear that, "Uranium mining within the watershed may increase the amount of radioactive materials and heavy metals in the surface water and groundwater flowing into Grand Canyon National Park and the Colorado River, and deep mining activities may increase mobilization of uranium through the rock strata into the aquifers. In addition, waste rock and ore from mined areas may be transported away from the mines by wind and runoff."[4]

We therefore concur with the perspectives expressed by Dr. David K. Kreamer, hydro-geologist and professor at the Department of Geoscience, University of Nevada Las Vegas, when he testified before Congress that: *"I believe that an assumption that uranium mining will have minimal impact on springs, people and ecosystems in the Grand Canyon is unreasonable, and is not supported by past investigations, research, and data."*[5] It could take years or even decades for the effects of uranium pollution to manifest, and by then, it would simply be too late. Is that worth the terrible risk?

A serious threat to Grand Canyon's cultural heritage

Consider the social justice ramifications and human cost of uranium mining pollution on the eleven Native American tribes who hold Grand Canyon sacred. These include the Havasupai, Hualapai, Kaibab-Paiute, Hopi, and Navajo whose lands are directly adjacent to the canyon and river and who rely on the watersheds for drinking water and to sustain livestock and crops.

Uranium mining's toxic legacy on the Navajo Nation continues to this day with increased cancer rates, and over 500 abandoned mines that are still awaiting clean-up. Additionally, the very future of Havasupai people who currently live in the bottom of Grand Canyon is at particular risk since they rely completely on Grand Canyon springs and seeps as their sole water sources.

In 2015, the National Trust for Historic Preservation named Grand Canyon to its list of *America's Most Endangered Places* because the area's incredibly rich cultural heritage is at risk from multiple threats, including uranium mining. As they note: "*Ten of the twelve types of springs found in the world are found within Grand Canyon National Park. These places play a pivotal role in the religious traditions of many of the region's tribes, which consider them sacred*."[6]

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[3] U.S. Department of the Interior & USGS, Scientific Investigations Report No. 2010 - 5025: Hydrological, Geological, and Biological Site Characterization of Breccia Pipe Uranium Deposits in Northern Arizona (2010), available at http://pubs.usgs.gov/sir/2010/5025/pdf, see Page 194

[4] Ibid, Page 5

[5] Testimony of David K. Kreamer, Professor, Department of Geoscience, University of Nevada, Las Vegas (07/21/09)

[6] https://savingplaces.org/places/grand-canyon#.WgowUrpFxMs

Grand Canyon National Park is a pillar of our state, regional and local economy

Grand Canyon, one of the "Seven Natural Wonders of the World," has been in the making for at least 6 million years, and was designated as a National Park almost 100 years ago. A new National Park Service report shows that close to six million visitors to Grand Canyon National Park in 2016 spent $648,170,900 in communities close to the park.[7] These visitors come to marvel at an iconic landscape that has been protected for its unique qualities and for the benefit and enjoyment of people worldwide. Tourism to Grand Canyon National Park had a cumulative benefit of $904 million to Northern Arizona's economy, and supported nearly 9,779 jobs.[8]

Tourism has been and always will be a significant part of Northern Arizona's economy, but is entirely dependent on our abilities to make wise decisions that honor and protect our beautiful, fragile landscapes over the long term.

Outdoor recreation is a key economic driver for the U.S.

Outdoor recreation is now among our nation's largest economic sectors. As commercial river guides, outdoor recreation is our chosen profession, but also our lifelong passion. We seek out the incredible landscapes of our national forests and public lands in the Grand Canyon region for river running, camping, hiking, biking, canyoneering and the outstanding opportunities for solitude, dark night skies, and immersion in untrammeled nature. We are not alone in how deeply we value our public lands as an astounding *national resource* – a resource that is in our continued interest to preserve and protect. According to a recent report from the Outdoor Industry Association (OIA), the outdoor recreation economy[9] currently generates:

- $887 billion in consumer spending annually
- 7.6 million American jobs
- $65.3 billion in federal tax revenue
- $59.2 billion in state and local tax revenue

No benefit to the U.S. from mining these lands

Compare the magnitude of the sustainable outdoor recreation economy and the significant economic benefits derived from Grand Canyon National Park itself with these salient facts:

- No nuclear energy is currently derived from national forest lands. Most of the uranium used for the U.S. nuclear reactors actually comes from international sources (89% in 2016, per the U.S. Energy Information Administration).

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[7] 2016 National Park Visitor Spending Effects Economic Contributions to Local Communities, States, and the Nation. Natural Resources Report NPS/NRSS/EQD/NRR – 2017/1421, Catherine Cullinane Thomas (Fort Collins Science Center) and Lynne Koontz (NPS Environmental Quality Division, Fort Collins, CO)

[8] Ibid

[9] https://outdoorindustry.org/resource/2017-outdoor-recreation-economy-report/

- Pursuant to the 1872 Mining Law, no royalties will be earned from uranium extraction, so no money would be generated for the U.S. Treasury.
- The future of nuclear power in the U.S. is in question after two reactor projects were abandoned this summer due to cost overruns, delays, construction problems and disputes with regulators. As one industry expert observed, *"We've let our nuclear industry atrophy for 30 years, and we've lost the robust supply chains and expertise needed"* in building reactors. [10]
- The U.S. so far has no more plans to commission building new reactors (especially on the West Coast) and is actually shutting more reactors down as the energy landscape of the United States evolves.
- The difficulties of long-term nuclear waste disposal and clean-up remain despite legal obligations to solve those pressing issues.
- In fact, there are over 15,000 abandoned uranium mines in over 14 western states.[11] Because the 1872 Mining Law does not require reclamation or remediation, mining operators have a history of simply walking away from their toxic legacy. Remediation then falls to the federal government with taxpayers footing the bill for clean-up.

Taken together, these facts lead us to believe that private mining companies would be the *only* beneficiaries of any revision or roll-back of the uranium mining withdrawal while the grave risks and consequences could negatively affect Grand Canyon National Park, the Colorado River and its watershed, tribal communities, our thriving tourist/recreation economy, and American taxpayers for generations to come.

Therefore, Grand Canyon River Guides strongly urges you to support the unmodified continuation of the 20-year withdrawal of these million or so acres from uranium mining development. There are many urgent reasons to disallow uranium mining in the vicinity of the canyon: the potential for radioactive and chemical contamination of the environment, the lack of independent oversight and monitoring programs, the physical degradation that always accompanies such efforts, the health risks to people, the potential impacts on tourism, and the affront to native traditions and understanding. However, the heart of why we believe the 20-year uranium moratorium should be retained in its current form is – **this is THE Grand Canyon, one of the "Seven Natural Wonders of the World," the iconic crown jewel of our National Park system, and World Heritage Site.**

These are some of our greatest public lands, held in the public trust for us to care for and protect for future generations to enjoy. Our greatest hope is that the withdrawal designation for lands adjacent to Grand Canyon National Park will one day become a permanent one.

Please continue to protect Grand Canyon! Thank you very much for your consideration.

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[10] U.S. Nuclear Comeback Stalls as Two Reactors are Abandoned" by Brad Plumer, New York Times, 7/31/2017: https://www.nytimes.com/2017/07/31/climate/nuclear-power-project-canceled-in-south-carolina.html

[11] https://www.abandonedmines.gov/wbd_um.html

Respectfully,

Grand Canyon River Guides, Inc.
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cc: Administrator Bryan Rice, Bureau of Indian Affairs
Chief Tony Tooke, USDA Forest Service
Acting Director Michael D. Nedd, U.S. Bureau of Land Management
Acting Director Greg Sheehan, U.S. Fish and Wildlife Service
Acting Director Michael T. Reynolds, National Park Service
Superintendent Christine Lehnertz, Grand Canyon National Park
The Honorable John McCain, U.S. Senate
The Honorable Jeff Flake, U.S. Senate
The Honorable Tom O'Halleran, U.S. House of Representatives
The Honorable Raúl Grijalva, U.S. House of Representatives
The Honorable Ruben Gallego, U.S. House of Representatives
The Honorable Kyrsten Sinema, U.S. House of Representatives