



PO Box 1934
Flagstaff, AZ 86002
(928) 773-1075 phone
(928) 773-8523 fax
info@gcrg.org
www.gcrg.org

November 15, 2019

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE
Washington, DC 20426

Re: Pumped Hydro Storage, LLC; Notice of Preliminary Permit Application Accepted for Filing and Soliciting Comments, Motions to Intervene, and Competing Applications for:
Project # 14992-000 – Navajo Nation Salt Canyon Trail Pumped Storage Project
Project # 14994-000 – Navajo Nation Little Colorado River Pumped Storage Project

Dear Secretary Bose,

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 passionate defenders of the Colorado River through Grand Canyon and the surrounding region, Grand Canyon River Guides respectfully submits our comments in regard to the above referenced permit applications (P-14992 and P-14994) filed in Federal Register Volume 84, No. 184, on September 23, 2019.

We recognize that a preliminary permit's sole purpose is to grant the permit holder priority to file a license application during the permit term, and that the Federal Energy Regulatory Commission (FERC) rarely rejects applications to conduct preliminary feasibility studies. **However, GCRG would like to take this opportunity to outline the many compelling reasons these two proposals are profoundly unfeasible, to the extent that they should be immediately denied.**

Cultural Concerns: Permit applications are required to list all Native American tribes that would be affected by the project in question, yet in both of the aforementioned applications, Pumped Hydro Storage, LLC only lists the Navajo Tribe as being affected. We would like to point out that:

- The Little Colorado River (LCR), a major tributary to the Colorado River, is culturally and spiritually significant to ALL of the affiliated tribes of Grand Canyon. **Therefore, all affiliated tribes should be consulted on a government-to-government basis.**
- As the Hopi Tribe has made abundantly clear in their strongly worded official comments to FERC, dated October 23, 2019, *"Any development within the area of the Confluence will forever comprise the spiritual integrity of this Sacred Place."* In fact, the Hopi Tribe finds the LCR dam proposals and their respective locations to be *"simply unacceptable."*
- **The Little Colorado River Pumped Storage Project (P-1994) would flood the sacred Hopi place of emergence, the Sipapuni.** Grand Canyon is also the final resting place for the spirits of the deceased.
- It should be noted that the Salt Canyon Trail along the Little Colorado River has been used for thousands of years as the sacred route of pilgrimage from the Hopi Mesas to the Hopi Salt Mines in Grand Canyon.
- The Navajo and Hopi Tribes must abide by their 2006 Intergovernmental Compact to refrain from harming or otherwise impeding access to their respective cultural sites while establishing their rights to engage in traditional religious practices on these lands. **Project 14992 and 14994 would make it impossible for the Navajo and Hopi tribes to uphold their legally binding obligations under the 2006 Intergovernmental Compact which stemmed from their mutual desire to resolve the Navajo-Hopi land dispute.**
- Local, regional, national, and even international outcry about a previous proposal for massive development (with tramway) at the Confluence of the Little Colorado and Colorado Rivers led to its ultimate defeat by the Navajo Nation Council. **The LCR area has already been a hotbed of controversy,** serving as a flashpoint to crystalize the public's profound desire to preserve and protect this sacred area in perpetuity.
- The bottom line is: the **Little Colorado River corridor is a sacred cultural landscape, and a living, interconnected ecosystem,** that is central to the ancestral past, but also vital to the present and future of the affiliated tribes. Everything – the sacred sites, the Salt Trail, plants, animals, rocks, minerals – holds cultural, religious and historical significance.

Endangered Species Concerns: The endangered Humpback Chub (HBC) is a native fish endemic to the Colorado River that evolved around 3-5 million years ago. The largest population of this

endangered fish is found in Grand Canyon, primarily in the Little Colorado River and its confluence with the Colorado River. This lower basin population is the largest with the core population of roughly 18,000 adults. Please note:

- The endangered humpback chub spawn in the Little Colorado River where warmer water and suitable spawning habitat is available, while water released from Glen Canyon Dam in the Colorado River is too cold for successful reproduction.
- **Any change to the key conditions of the Little Colorado River (such as temperature, turbidity, etc...) could profoundly affect the recovery goals/plan for HBC by disrupting a spawning population that is critical to the survival of this ancient, endemic species.**
- Both permit applications fail to include the following relevant “political subdivisions that there is a reason to believe would likely be interested in, or affected by, the application,” namely:
 - U.S. Fish and Wildlife Service
 - U.S. Department of the Interior
 - Bureau of Reclamation

Additional Concerns: The Little Colorado River is the largest tributary in Grand Canyon National Park, and it also has unique properties that make dams impractical and inadvisable:

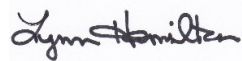
- Sedimentation – The Little Colorado River Gorge can experience dramatic flooding and high sediment loads characteristic of desert rivers, posing a significant problem for the upper reservoir of this proposed dam project. Based on 25 years of continuous monitoring at the Cameron, AZ Gauging Station, the average annual sediment load for the Little Colorado River is approximately 4.6 million metric tons (of which 4 million metric tons is heavy, dense silt and clay). (*Grand Canyon Monitoring & Research Center discharge data*).
- Impacts to Colorado River management – With the advent of Glen Canyon Dam, only two major tributaries (the Paria River and the Little Colorado River, which enters the mainstem at River Mile 61.5, at the lower end of Marble Canyon) are the suppliers of much-needed sediment, the lynchpin for the health of multiple resources along the Colorado River. **Any reduction in sediment inputs from the Little Colorado River would negatively affect the Sediment Resource Goal identified by the Long Term Experimental and Management Plan for Glen Canyon Dam (LTEMP): “Increase and retain fine sediment volume, area, and distribution in the Glen, Marble and Grand Canyon reaches above the elevation of the average base flow for ecological, cultural and recreational purposes.” (LTEMP FEIS, October 2016)**
- Flow Fluctuations – from a raging river, to a trickle, the wild flow fluctuations and unpredictability of the Little Colorado River are not conducive to the purposes for which these two projects have been proposed. In fact, extreme flooding could potentially put the dams themselves at risk of damage or failure. During the summer monsoon season, peak discharges can be as high as 100,000 cubic feet per second (*Arizona Geological Survey*). Could these proposed dams withstand a peak flow of 120,000 cfs, the highest ever recorded at the Cameron Gaging Station on the Little Colorado River on September 20, 1923?

- Industrialization – this is an extremely remote, quiet and pristine area that would suddenly be impacted by the construction of dams, reservoirs, roads, transmission lines, and other related infrastructure. The impact on wilderness qualities and ecology would be profound.
- Travertine – the lower dam and its mechanical structures such as the pumps and turbines would rapidly become covered with travertine deposited by Blue Spring, a permanent, year-round source of the milky, mineral-laden turquoise blue water that is characteristic of the Little Colorado River.
- Aesthetics/Recreation – the beautiful blue-green waters of the Little Colorado River resulting from the dissolved travertine and limestone deposits are spectacular, making the Confluence of the LCR and Colorado Rivers one of the key attraction sites for river runners in Grand Canyon National Park.
- Costs – According to the full proposals, despite the significant cost estimates to develop the plans, perform the requisite studies, tests, surveys, etc... (cost estimates ranging from between 4 to 8 million dollars for Project 14992, and between 5 to 10 million dollars for Project 14994) there are as yet no investors or identified funding sources.

As a river stakeholder knowledgeable about Grand Canyon, the Colorado River, and its tributaries, Grand Canyon River Guides contends that both preliminary permit applications (P-14992 and P-14994) are completely unfeasible to the extent that they should immediately be denied by the Federal Energy Regulatory Commission for the reasons clearly stated above. We completely understand the need for improved economic opportunities, green energy, and sustainable development within the Navajo Nation, but those plans should not be pushed by an outside developer with no knowledge or regard for significant cultural concerns or ecological integrity.

Thank you very much for your time and consideration.

Respectfully,
Grand Canyon River Guides, Inc.



Lynn Hamilton	Executive Director, for:
Margeaux Bestard	President
Al Neill	Vice President
Fred Thevenin	Treasurer
Mariah Giardina	Director
Lars Haarr	Director
Zeke Lauck	Director
Billie Prosser	Director
Justin Salamon	Director
Lynne Westerfield	Director

LITERATURE CITED:

Glen Canyon Dam Adaptive Management Program WIKI:

<https://www.nps.gov/grca/learn/nature/shinumotransloc.htm>

Grand Canyon Monitoring & Research Center, Little Colorado River gauging station at Cameron, AZ, suspended silt/clay concentration and suspended sand concentration:

https://www.gcmrc.gov/discharge_qw_sediment/station/GCDAMP/09401200

The Hopi Tribe (official comments to FERC, dated 10/23/2019):

<https://savetheconfluence.com/wp-content/uploads/2019/10/hopi-letter-hydropower.pdf>

The Hopi Landscape and People: <https://www.gcr.org/docs/gtslib/hopi-07.pdf>

University of Arizona, Arizona Geological Survey. Confluence of the Colorado River and Little Colorado River, Arizona. <http://azgs.arizona.edu/photo/confluence-little-colorado-river-and-colorado-river-arizona>

U.S. Department of Interior, Bureau of Reclamation, Upper Colorado Region, National Park Service, Intermountain Region, October 2016. Glen Canyon Dam, Long Term Experimental and Management Plan, Environmental Impact Statement, Final Executive Summary

http://itempeis.anl.gov/documents/final-eis/Executive_Summary.pdf

U.S. Department of the Interior, National Park Service, Grand Canyon National Park. Humpback Chub Tributary Translocations. <https://www.nps.gov/grca/learn/nature/shinumotransloc.htm>