



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
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In Reply Refer To:
19-0427

Filed electronically

November 14, 2019

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

Subject: COMMENTS - Notice of Application for Preliminary Permit for the Navajo Nation Little Colorado River Pumped Storage Project, FERC No.14994-000, Coconino County, AZ (**ER 19/0427**)

Dear Ms. Bose:

The U.S. Department of the Interior (Department) has reviewed the September 17, 2019 Notice of Application for Preliminary Permit for the Navajo Nation Little Colorado River Pumped Storage Project, which would be located on the Little Colorado River (LCR) in Coconino County, Arizona. On May 10, 2019, and August 1, 2019, Pumped Hydro Storage, LLC, filed an application and a revised application for a preliminary permit, pursuant to section 4(f) of the Federal Power Act (FPA), proposing to study the feasibility of a pumped storage project on the LCR. The Department offers the following comments on the application, which include contributions from the Department's U.S. Fish and Wildlife Service (Service), National Park Service (NPS) and Bureau of Indian Affairs (BIA). We organized our comments by resource area.

Per the preliminary permit application, the proposed pumped storage project (project) would be located entirely on Navajo Nation tribal trust lands. Pumped storage projects store and generate energy by moving water between two reservoirs at different elevations. The proposed project would include the following: (1) a new 200-foot-high, 3,200-foot-long upper dam and reservoir; (2) a new 150-foot-high, 1,000-foot-long lower dam and reservoir; (3) eight 400-megawatt, turbine-generator units; (4) two new 22-mile-long, 500-kilovolt transmission lines; and (5) pertinent facilities. The proposal includes building a concrete arch dam across the LCR and a rockfill dam across a small tributary on the plateau above the lower dam. The application states that the new lower reservoir dam would create a 2.5-mile long reservoir within the LCR.

Fish and Wildlife Resources

Section 7(a)(2) of the Endangered Species Act of 1973, as amended, requires Federal agencies to consult with the Service to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or

adversely modify designated critical habitat. Since the proposed project area contains listed species and designated critical habitat, section 7(a)(2) consultation with the Service would be required if FERC approved the proposed application.

Humpback chub

The humpback chub (*Gila cypha*, chub) is a fish endemic to the warm-water portions of the Colorado River system of the southwestern United States. The humpback chub is listed as endangered under the ESA throughout its historical range in the states of Arizona, Colorado, Utah, and Wyoming (50 CFR 17.11 & 17.12). The historical range of the species includes portions of the Colorado, Green, and Yampa rivers, but the construction of mainstream dams reduced the range in canyon areas. The construction of Flaming Gorge (Hideout Canyon) and Hoover dams (Black Canyon) caused the extirpation of two of eight documented humpback chub populations (USFWS 2017). The Service and partners manage humpback chub as two units, the 'Upper Basin' and 'Lower Basin,' separated by Glen Canyon Dam. There are currently only five extant chub populations, including four upstream of Lake Powell (Black Rocks, Westwater Canyon, Desolation/Gray canyons, and Cataract Canyon) and one downstream of Lake Powell (Grand Canyon, which includes the LCR). All extant chub populations have historically experienced periods of decline. The Grand Canyon/LCR chub population increased from minimum levels observed in the early to mid-2000s; has been stable since 2008 and represents the largest remaining population in existence (USFWS 2017).

In the Lower Basin, humpback chub reproduction in the LCR sustains the entire Grand Canyon Humpback Chub population (Yackulic *et al.* 2014). Therefore, the LCR is a significantly important stream for the endangered humpback chub across the range of the species. The lower 12.9 km (8 miles) of the LCR is designated critical habitat (as is the mainstem Colorado River in Grand Canyon), and is the principal spawning area for the species in the Lower Basin of the Colorado River. In addition, the LCR provides habitat and food for the core population of humpback chub in the Grand Canyon.

The proposed dam would eliminate more than two thirds of spawning and rearing habitat for the humpback chub in the LCR, which would negatively affect the ability of the chub to sustain its population in the LCR and throughout the Grand Canyon. If constructed as proposed this project could change the Service's assessment of projected future condition for the humpback chub (USFWS 2017).

The proposed dam would also create a barrier and completely restrict chub movement within the LCR. Humpback chub migrate from the Colorado to the Little Colorado to spawn, so a dam in the LCR would prevent this movement from occurring and would be extremely detrimental to the chub's persistence both in the LCR and in the mainstem Colorado River within Grand Canyon National Park.

The proposed dam would significantly change the hydrology, geomorphology, temperature, turbidity and other water quality characteristics in the LCR. Changes to water temperature, turbidity, and hydrology not only hinder reproduction of native fishes, such as the humpback chub, but also provide favorable conditions for non-native fishes (Minckley and Deacon 1991; Olden *et al.* 2006). Non-native fish that establish in the 2.5-mile long reservoir formed above the proposed LCR dam, as well as in the reservoir on the canyon rim, could then move down into the lower LCR and the Colorado River mainstem and adversely affect chub and other native fish

through predation and competition throughout Grand Canyon National Park. The negative changes to key habitat characteristics including hydrology, geomorphology, temperature, and turbidity following the installation of dams in the Colorado River Basin, have led to the decline or extirpation of native Colorado River fishes throughout the basin, including humpback chub (Minckley and Marsh 2009, USFWS 2017).

Flannelmouth and bluehead suckers

The LCR also provides high quality habitat for the native flannelmouth (*Catostomus latipinnis*) and bluehead (*Catostomus discobolus*) suckers. The Service, NPS, Reclamation, tribes, multiple states, and many other partners are signatories to a three species range-wide candidate conservation agreement (UDNR 2006) committed to active conservation of these two suckers, as well as the roundtail chub (*Gila robusta*). In part, the signatories aimed the agreement and concomitant actions at reducing the likelihood of listing additional species as threatened or endangered under the Endangered Species Act. The LCR is important adult, spawning, and nursery habitat for these species, and the proposed action would negatively affect the status of these species in the LCR, and in the Colorado River in Grand Canyon National Park.

Migratory Birds and Raptors

The preliminary permit application includes two new 22-mile-long, 500-kilovolt transmission lines. Electrocution on power lines is a major threat to birds, in particular birds of prey such as the golden eagle (*Aquila chrysaetos*) and other raptors that occur within the project area. In addition, collisions with electric utility lines kill between 8 million and 57 million birds in the United States annually. Combined with electrocutions, bird fatalities resulting from electric utility lines have been a long-standing bird conservation issue. Even though we need more research in this area, experts recommend a number of options for reducing bird collisions with transmission lines (see APLIC 2012).

Water Resources

Periodic high flows serve to scour the LCR of accumulated sediment and to break up some of the travertine that builds up over time because of the calcium carbonate precipitate characteristic of the stream. Researchers related strong year classes of humpback chub to high spring flow in the LCR, indicating that high flows cleanse marl (unconsolidated sedimentary rock consisting of clay and lime), sediment, and precipitate from the system, stimulate food production, and enhance survival of eggs and larvae (Gorman and Stone 1999, Van Haverbeke *et al.* 2013). Both the base flow provided by Blue Spring, and the periodic high spring flows provided by snow-melt runoff are important in maintaining suitable spawning condition for the aquatic species (including humpback chub) in the LCR. The proposed project would significantly affect the magnitude, frequency, duration, timing, and rate of change of the LCR flow regime and demonstrably affect both aquatic and terrestrial resources.

Land Resources

Grand Canyon National Park was established to preserve and protect the natural and cultural resources, and ecological and physical processes of the Grand Canyon along with its scenic, aesthetic, and scientific values for the benefit and enjoyment of the public. Although the

proposed project is situated on Navajo Nation lands adjacent to the Grand Canyon National Park boundary, it could significantly affect park resources by creating major changes in the Little Colorado River. The application for a preliminary permit identifies Grand Canyon National Park as an entity likely interested in, or affected by, the application. As the NPS has a responsibility to protect the resources and values of Grand Canyon National Park, the NPS would like to discuss these concerns in more detail if this project proceeds further.

The preliminary permit application states that the applicant will conduct geotechnical studies at the proposed dams, reservoirs, and tunnel locations by borehole drilling samples and test pits. The application also states that they will take measures to avoid or minimize disturbance at the drilling locations, and test pits will be backfilled to return the site as much as possible to natural conditions and that the methods to mitigate disturbances will be coordinated with the Navajo Nation Council. We recommend the applicants also coordinate with the Service, NPS, and all affected tribes prior to conducting these studies to ensure there are no impacts to endangered species, cultural resources, or NPS resources.

Long-term Experimental and Management Plan (LTEMP)

The Department, through the Bureau of Reclamation (Reclamation) and NPS are implementing the LTEMP for operations of Glen Canyon Dam, the largest unit of the Colorado River Storage Project. The LTEMP provides a framework for adaptively managing Glen Canyon Dam operations over 20 years consistent with the Grand Canyon Protection Act of 1992 (GCPA) and other provisions of applicable federal law. LTEMP determines specific dam operations and actions to implement to improve conditions and continue to meet the GCPA requirements and to minimize adverse effects on the downstream natural, recreational, and cultural resources in both Grand Canyon National Park and Glen Canyon National Recreation Area, including resources of importance to American Indian Tribes.

The proposed project is a concern because of its potential effects to implementation of the LTEMP which was approved in 2016. Reclamation and NPS jointly prepared this plan based on modeling that assumed a healthy population of humpback chub in the LCR. Major changes to the status of this humpback chub population could require re-consultation under section 7 of the ESA. The goal of the LTEMP is to protect downstream resources by adaptively managing the Glen Canyon Dam. The formation and maintenance of sandbars and beaches in the Grand Canyon could be impacted by the proposed projects. Sandbars and beaches are important for camping recreation, fish habitat, and for the preservation of cultural resources in the Grand Canyon. The relationship between sediment and these resources has been documented through many years of research and monitoring, and we encourage the FERC and applicant to consider these findings (East et al. 2016, East et al. 2017, Sankey et al. 2018). In addition, this plan supports and assumes a healthy population of humpback chub remaining in this tributary. Major changes to the status of this population could require re-consultation under section 7 of the ESA and could require additional compliance under NEPA. We recommend that FERC and the applicant work with USFWS and NPS to understand the potential impacts of the proposed dams if they are going to proceed further.

Tribal Interests

In addition to the shared interests we have with tribes for the above resources (e.g., water, golden eagles), below we discuss a number of tribal-specific interests tied specifically to the action area, including cultural resources.

The application, under Information Required, section (2)(v), instructs the applicant to identify all Indian tribes that may be affected by the project. However, the preliminary permit application lists only one tribe, the Navajo Nation. There are at least ten other tribes that may be affected. In addition to the Navajo Nation, these include, but are not limited to, the Havasupai Tribe, Hopi Tribe, Hualapai Tribe, Kaibab Band of Paiute Indians, Las Vegas Tribe of Paiute Indians, Moapa Band of Paiute Indians, Paiute Indian Tribe of Utah, San Juan Southern Paiute Tribe, Yavapai-Apache Nation, and the Pueblo of Zuni. All of these tribes have aboriginal and current connections to the project area. The LCR is an important and sacred place to all of the aforementioned tribes, and has been since time immemorial. The proposed project area is on land that the Federal government holds in trust for the Navajo Nation; however, all of the listed tribes used the area aboriginally. Through their traditions, these tribes maintain cultural and spiritual connections to the area today. Of particular note, most of these tribes consider the LCR, as part of the Grand Canyon, a National Register eligible Traditional Cultural Property (TCP) for the purpose of section 106 compliance under the National Historic Preservation Act. At least two tribes have formally nominated the Grand Canyon and its tributaries as a TCP, and as such, requiring preservation in perpetuity.

The significance of the Grand Canyon and its major tributaries transcends cultures as people travel from all over the world to visit a place where many ancestors of contemporary native people first came to know this world. To some of the peoples, like the Hopi and the Zuni, the Grand Canyon was home to their ancestors as they journeyed to their present homelands, miles from the canyon rim. Other tribes, like the Apache, Havasupai, Hualapai, Navajo, Southern Paiute, and Yavapai, stayed connected to the Canyon by living near, or within its depths. Both the Zuni and Hopi people have identified some of their most sacred places within the LCR. The proposed action would directly affect these locations.

The Department has a trust responsibility to each of the aforementioned tribes to ensure their resources are respected and protected. Because the proposed project may affect these tribes, the federal action agency or agencies, including the Federal Energy Regulatory Commission (FERC), need to consult with each tribe on a government-to-government basis to determine how each may be affected and how to address these effects.

Because the proposed project area is on the Navajo Nation, there are additional effects to consider. The Department recognizes the Navajo Nation as a governmental sovereign with inherent powers and authority to manage and control their natural resources, in addition to the cultural resources mentioned above. The Navajo Nation has authority over many natural resources, only two of which we will briefly mention here. The Navajo Nation maintains an endangered species list, which includes a number of listed species that occur in the LCR including, but not limited to the humpback chub. The Navajo Nation has also established the LCR as a Biological Preserve, pursuant to their Biological Resource Land Use Clearance

Policies and Procedures (RCP). The Navajo Nation's RCP does not allow development in a Biological Preserve unless it is compatible with the purpose of the area.

In furtherance of the Department's trust responsibility, its Bureaus and agencies participate in preliminary permit and licensing proceedings to ensure that tribal interests and resources are sufficiently considered and addressed before FERC makes any final decisions. BIA, in particular, exercises the Department's authorities under the FPA to ensure the protection and utilization of Indian reservations and to assist affected tribes in receiving reasonable annual charges for the use of tribal lands. If FERC grants this application and Pumped Hydro Storage, LLC develops a license application, the Department's Bureaus and agencies will actively participate in that proceeding and will work to ensure that potential effects to tribal lands and natural and cultural resources are sufficiently studied, addressed, and mitigated.

Cultural Resources/Historic Properties

Section 106 of the National Historic Preservation Act of 1966 (NHPA) requires Federal agencies to take into account the effects of their undertakings on historic properties, consult with various federal, state and tribal offices, and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment. Federal agencies must complete this process prior to moving forward with or issuing a permit, license, or assistance for an undertaking. While completion of the Section 106 process is not an "authorization" per se, a federal agency must be able to show evidence that it has properly concluded its review in accordance with the regulations. Since the proposed project area contains known historic properties, following the section 106 process would be required if FERC approved the proposed application.

Lands of the United States

In its application, Pumped Hydro Storage LLC is required to identify any lands of the United States that are enclosed within the proposed project boundary, including any Federal reservations within the project boundary. The applicant states, "[n]o public lands will be used for this project" (Exhibit 1, question 5). Earlier in both applications, however, it acknowledges that "[t]he Project will be located entirely on Navajo Nation lands" (Exhibit 1, question 1). The attached potential project map also clearly indicates where the project is located.

We wish to clarify that Indian reservations are Federal lands. The Navajo Nation's reservation is held in trust by the United States, and the United States and its agencies have a unique trust responsibility to those lands. Accordingly, we recommend modifying this statement in any future descriptions of these proposed projects to clarify that the projects would be located on a Federal reservation held in trust for the Navajo Nation.

If FERC grants this preliminary permit application and Pumped Hydro Storage LLC eventually chooses to pursue a license for the construction and operation of the proposed project, the company should be aware that the Department has statutory responsibilities to protect the lands and resources affected by the project. Section 4(e) of the FPA provides that the Commission shall issue licenses within a federal reservation only after a finding by FERC that the license will not interfere or be inconsistent with the purpose for which such reservation was created and acquired. This section also provides that licenses for hydropower projects on federal reservations shall contain such conditions as the secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and

utilization of such reservation. Thus, section 4(e) gives the Secretary of the Interior (Secretary) authority to impose conditions on licenses issued by FERC for hydropower projects located on reservations under the Secretary's supervision. Section 18 of the FPA also authorizes the Secretary to require fishways, as appropriate. Sections 10(a) and 10(j) of the FPA allows Departmental agencies and bureaus to recommend certain terms and conditions, including recommendations for the protection, mitigation, and enhancement of fish and wildlife. Finally, section 10(e) authorizes the Department, through BIA, to assist tribes in obtaining a reasonable annual charge for the use of tribal lands.

Conclusion

The Department appreciates the opportunity to review and comment on the preliminary permit application for the proposed project (FERC No. 14994-000). We have described substantial effects that could result from the actions identified in the preliminary permit application. The Department encourages the applicant and FERC to consult and coordinate with the Service, NPS, Reclamation, BIA, and all affected tribes if these projects proceed further. For questions regarding the National Park Service resources, please contact Rob Billerbeck at rob_p_billerbeck@nps.gov or at 303-987-6789. For questions regarding FWS resources, please contact Shaula Hedwall at shaula_hedwall@fws.gov or at 928-556-2118. For questions regarding tribal resources, please contact Harrilene Yazzie at harrilene.yazzie@bia.gov or at 505-863-8369. For all other questions, please contact me at janet_whitlock@ios.doi.gov or at (415) 420-0524.

Sincerely,



Janet L. Whitlock
Regional Environmental Officer

cc: Chairperson, Havasupai Tribe, Peach Springs, AZ
Chairman, Hopi Tribe, Kykotsmovi, AZ
Chairperson, Hualapai Tribe, Peach Springs, AZ
Chairperson, Kaibab Band of Paiute Indians, Fredonia, AZ
Chairman, Las Vegas Tribe of Paiute Indians, Las Vegas, NV
Chairman, Moapa Band of Paiutes, Moapa, NV
President, Navajo Nation, Window Rock, AZ
Chairwoman, Paiute Indian Tribe of Utah, Cedar City, UT
President, San Juan Southern Paiute Tribe, Tuba City, AZ
Chairman, Yavapai-Apache Nation, Camp Verde, AZ
Governor, Pueblo of Zuni, Zuni, NM
Executive Director, Intertribal Council of Arizona, Phoenix, AZ
Director, Southern Paiute Consortium, Fredonia, AZ
Director, Western Regional Office, Bureau of Indian Affairs, Phoenix, AZ

Director, Navajo Regional Office, Bureau of Indian Affairs, Gallup, NM
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Colorado River Coordinator, National Park Service, Lakewood, CO
Office of the Superintendent, Grand Canyon, National Park, Grand Canyon, AZ

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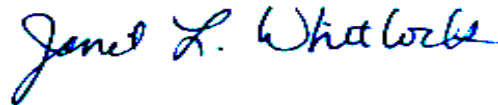
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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Navajo Nation Little Colorado River) FERC Project No. 14994-000
)
Department of the Interior COMMENTS)
on the "Notice of Application for Preliminary)
Permit for the Navajo Nation Little Colorado River)
Pumped Storage Project, FERC No.14994-000,)
Coconino County, AZ (**ER 19/0427**)")

Certificate of Service

I hereby certify that I have this day caused the foregoing document to be electronically served upon each person indicating a willingness to receive electronic service and served, via deposit in US mail, first-class postage paid, upon each other person designated on the official service list compiled by the Secretary in this proceeding. Dated on this 14th day of November, 2019.



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