March 22, 2024

Sent Via Email only – LTEMPSEIS@usbr.gov

U.S. Bureau of Reclamation
Attention: LTEMP SEIS Project Manager
125 South State Street, Suite 800
Salt Lake City, UT 84138

Subject: GLEN CANYON DAM LONG-TERM EXPERIMENTAL AND MANAGEMENT PLAN (LTEMP) DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (DSEIS) – 89 FR 28, February 9, 2024

Dear LTEMP SEIS Project Manager:

On behalf of Utah Municipal Power Agency (UMPA), we submit the following comments in response to the LTEMP Draft Supplemental Environmental Impact Statement (DSEIS).

Background

UMPA represents six Utah cities[1] receiving power and energy from contracts to the Colorado River Storage Project (CRSP) federal hydropower system. UMPA is a non-profit joint action agency organized under the interlocal act of the State of Utah with the all-requirements and obligation to provide electricity to these six cities and manage the CRSP contract for federal hydropower. The contract for federal power is a major energy source for UMPA's member cities, supplying just under 25% of its overall requirements in 2020.

UMPA has already been harmed as a result of several years of drought. It has resulted in reducing our federal allocation by 40%, raised the contracted energy rate by 14%, and caused the purchase of replacement power in the energy market to be higher prices. The replacement power comes from either coal-fired or natural gas-fired sources, and not the clean renewable energy from hydropower. In 2022, UMPA's wholesale rates were increased by $5.2 million, or about 11% increase caused from drought conditions. This impact along with other inflationary costs, supply chain challenges, lack of coal supply, and higher natural gas pricing are placing a strain on our ability to deliver reliable and affordable electricity to the customers.

UMPA's federal power is relatively minor compared to the more than 5 million customers across the regional states receiving federal power from CRSP, administered by Western Area Power Administration (WAPA) under the Dept. of Energy. However, Glen Canyon Dam (GCD) and the federal facilities are major contributors to providing customers with clean, renewable (carbon-free) power to maintain the reliability of the grid and offer an affordable price to the

[1] UMPA member cities are Provo, Spanish Fork, Salem, Nephi, Levan, and Manti. These cities provide electrical service to over 58,000 residential and business customers.

consumers. Simply said, any reduction in federal power from GCD compromises the integrity of the grid system and raises rates for our consumers.

Invested Interest

UMPA is member of the Glen Canyon Dam Adaptive Management Work Group (AMWG) and is one of the two buyers of federal hydropower and resources from the GCD, which is the largest and primary feature of the CRSP. Any reduction of energy production at GCD has a direct impact on UMPA.

UMPA and its largest member, the City of Provo, are participating board members with the Colorado River Energy Distributors Association (CREDA). CREDA is very active with AMWG and Adaptive Management Program (AMP). CREDA is also a longstanding participant in the Upper Colorado River Endangered Fish Recovery Program. CREDA members serve over 4.1 million consumers in the states of Arizona, Colorado, Nebraska, Nevada, New Mexico, Utah, and Wyoming, and represents the majority of the firm electric service customers of the CRSP.

We acknowledge the importance of protected species and recognizes the risks associated with smallmouth bass (SMB) proliferation in the river reaches below Lees Ferry. Many years of good science and multi-millions of dollars[2] have been invested in protecting endangered fish species and improving the habitant of the river. Although Reclamation has well intention in drafting the DSEIS, it has been rushed and lacks a thorough and comprehensive examination of other alternatives other than use of the bypass tubes.

Hydropower Issues

The western region continues to demand more electricity with limited and ready-available power sources as we move towards electrifying everything from transportation, data centers and A.I. This added pressure from growth along with a reduction at GCD conflicts with the utilities maintaining the reliability of the grid system. With the efforts to move the DSEIS quickly, UMPA is concerned that there has been insufficient time by those grid operators including WAPA to model and decide the full impacts to the grid system based on the bypass alternatives.

GCD is a major power source of power on the transmission grid system and offers spinning reserves and other emergency supporting services. With the rapid retirement of the coal-fired base load and dispatchable facilities in the West and by adding intermittent renewable sources, the grid become more unstable and subject to disruptions and quality of service. Reducing any generation from GDC will add to this already compromised grid system. The DSEIS should consider examining the impacts to the stability of the grid and the significant role of GCD.

WAPA is the balancing authority for the operating region and must maintain sufficient generating capacity to continue serving its customer load. This is to ensure reliable power is always available with uninterrupted service to the transmission grid. As shown in the past, this is

[2] Some have estimated roughly a total of billion dollars have been invested in protecting the endangered fish species downstream of GCD and other culture, science, and environmental programs.

particularly important for emergency situations. In the event of a large loss of generation capacity, WAPA is called upon to provide emergency reserves within minutes. WAPA's ability to supply emergency assistance and maintain its anchor source for stabilizing the grid in the West are critical missions.

The modeling of energy costs in the DSEIS fails to adequately examine the impacts to WAPA customers outside of the Palo Verde energy markets.[3] WAPA customers in other regions participate in energy markets not studied and modeled in the DSEIS. Without these comprehensive efforts to better study and model these other market site results in undervaluing the impacts to the WAPA customers. UMPA request a comprehensive look at the energy markets outside of Palo Verde energy market.

UMPA urges for the removal of the current 3.3 section in DSEIS and supports the insertion of WAPA proposed 3.3 Energy and Power submitted March 15, 2024.[4] The current modeling data is deficient and needs to be replaced with best available information from WAPA. The modeling tools used by WAPA is much more comprehensive advanced, evidenced, and qualified than those used in the DSEIS. Reclamation fast-tracked the modeling to produce the DSEIS promptly, however, it is clear that this modeling work and assessment of hydropower replacement costs should be provided within the federal family with the highest degree of science and expertise on the matter by WAPA. Not that the prior study has no merit, but better science should be applied in this case.

The DSEIS lacks details on the funding sources to cover the cost of replacing any lost production of hydropower energy in considering any of the bypass flow options. We know that there are insufficient funds in the basin fund supplied from power revenues from WAPA customers to cover the cost of replaced energy in the market. Reclamation should name the funding source and not simply defer this matter to WAPA. Protecting the endangered fishery below GCD is in the best interest of all the parties. However, placing the burden for funding these experimental fish flow options on the backs of the power customers is unfair. The power customer did not introduce the SMB, a non-native fish, into Lake Powell. No one expected the low elevation and entrainment of fish caused by the drought. The federal agencies should seek federal funding or use their federal budgets to address this matter if the decision to proceed with by-pass flow happens. There are several beneficial uses with GCD not being recovered and assigned through an appropriate pay structure.

As a WAPA customer, we believe that the contractual obligations places the financial burden on WAPA for any replacement power costs. However, if the cost for replacement power is passed on the WAPA customers, we are opposed to this. This matter is a fishery and endangered species requiring the participation of the other beneficial uses of GCD.

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[3] Page 2-9 of DSEIS.

[4] Email to LtempSEIS@usbr.gov from Rodney Bailey, Senior VP and Colorado River Storage Project Manager, WAPA on March 15, 2024, with all of its attachments.

If the reduction of hydropower energy from using the bypass tubes is somehow transferred by WAPA onto its customers, UMPA would be thrust into an already competitive spot or day ahead market to find replacement energy. With current energy market conditions, UMPA had not been given ample time to model the impacts on its budgets. However, it is easy to conclude that the cost would be extremely high due to the lack of energy sources available in the market, especially during the summer months.

UMPA is concerned that the replacement power will not be clean and renewable. We value the environmental attributes of hydropower in promoting UMPA's goals and commitments toward a carbon-free energy portfolio. Replacing hydropower from a renewable source will not occur in the energy market. If power utilities already have solar and wind, these renewable sources are already economically dispatched in conjunction with CRSP power before any carbon fueled generation is operated.

The drought has already impacted CRSP customers causing them to enter the energy market to replace power not supplied by WAPA. Selecting any of the flow options would cause WAPA to enter into the energy market to replace the lost power. Customers will then be competing with WAPA as a buyer in the markets. Prices will increase for all utilities in the market from the constraint of energy supplies, transmission path congestion and fuel conditions. The DSEIS has not considered the added operational constraints in the already competitive energy market.

The power customer did not introduce the SMB, a non-native fish, into Lake Powell. No one anticipated low lake elevation and entrainment of fish. The federal agencies should seek federal funding or use their federal budgets to address this matter if the decision to proceed with by-pass flow happens. We ask that the study examine the beneficiary use and pay structure of GCD caused by the impacts of the drought. There are several beneficial uses with GCD not being recovered through an appropriate pay structure.

Three years is a long time for this experimental flow along with the costly replacement power. With the forecast of lower lake levels in the future, we urge Reclamation to take immediately action and begin the work on a barrier device in the forebay as discussed for the long-term solution to this challenge. The prior effort is deficient by only focusing on the mixing of flows using the bypass tubes to address the SMB matter and did not seriously examine other options. A better solution must be development that does solely rely on water temperature and bypass flows.

In summary, to protect reliability to the grid and affordability to the customers, there must be established offramps of any experimental design flows and immediately cease the experiments if replacement power is not available in the market or if the basin fund cannot sustain those replacement costs. Another major concern is the wasteful usage of federal monies within the federal families competing to perform outside of their expertise and roles with AMP. Historically, WAPA provided the modeling of energy costs for HFE and Reclamation relied on WAPA for guiding the discussion on these critical financial and energy matters. Now due to a

lack of trust between certain agencies, the SDEIS contains inadequate information provided this agency.

Environmental Concerns

After hearing reports at AMWG and the Annual Reporting meeting, UMPA is concerned that the invasive fish species and predators of the endangered fisheries are already established downstream. There are plenty of locations of tributaries, springs, eddies, and coves with pockets of warmer water conducive for SMB, green sunfish, and non-native species to the Colorado River. Will this effort to remove or manage the SMB be successful when other attempts have failed?[5]

The slough at mile maker-12 continues to be a problem and has become a nursery for these invasive fish. Why is the focus on water temperature and bypass flows when this natural hatchery for invasive fishery is allowed to exist? Several attempts to fix the slough and chemical treat the fish over the years have yielded marginal results and failed to accomplish the end goal. Chemical treatments and the taking of life are discouraged by tribal partners. Until the slough is addressed appropriately based on technical recommendations by participating partners, results from the bypass flows for SMB seems futile with little benefits. We understand that the National Park Service is proceeding with assessment of actions necessary to address the -12-mile slough. We believe that this work is more urgent.

UMPA is concerned that there is insufficient fishery data in many of the tributaries and springs feeding the Colorado River and providing warmer waters where existing breeding grounds offer refuge to these invasive species. More downstream assessments need to be conducted to better determine the establishment and population of the SMB and green sunfish. If these invasive species of fisheries are already established further downstream, then the proposed SMB flows being considered offer little value in protecting the endangered species. There are current statements that green sunfish already occur throughout the Grand Canyon in small numbers. Should we be concerned about the potential impacts from dispersal? This seems to suggest that there is a lack of quantitative research on green sunfish movement or dispersal in response to flows.

We understand that WAPA has formed a panel of fishery expert to evaluate these matters and the alternatives. More expertise from outside sources to examine the threat to the humpback chub should be encouraged. We strongly urge that the findings of this panel of fishery experts be included in the final report.

SMB populations are increasing but so are the humpback chub which has been downlisted from "endangered" to "threatened." The Western Grand Canyon population of approximately 66,000 must be taken into consideration in the DSEIS risk assessment. Lake Powell elevations have also risen due to better than average hydrology in 2023, cooling the waters and lowering the risk

[5] Page 1-3 DSEIS "In 20 years of mechanical removal efforts of SML in the Upper Colorado River Basin upstream of GCD, there have been limited success in reducing SMB densities to benefit native fish populations."

of entrainment. Current forecasts show above average snowpack with favorable water inflows into Lake Powel. There is no reason to implement experiments right away.

Although, there are several flows with mixing of the bypass tubes being analyzed to disrupt the spawning and reproduction cycles of these invasive species, the impacts to power production may not warrant the effort if the species are already established. With some of the higher flow patterns, there should be a concern that the invasive species are pushed downstream further into warm water conditions and no flows regime will be able to affect nor prevent their reproductive efforts. Pushing these invasive species further downstream is contrary to all prior efforts in protecting the populations of threatened humpback chub in and around the Little Colorado River and its confluence with the Colorado River mainstem.

If the Reclamation moves forward with a proposed flow to address the SMB what will the criteria for measuring success? It appears to us that there are still open discussions and debate among the experts on SMB and the benefits of the proposed flows. To the nonexpert, the proposed flow controls and justification is a based-on trial-and-error method. Without a good baseline of fishery data downstream, success could be a moving target with no clear outcomes. Any proposed flow patterns need to demonstrate clear and measurable objectives against the costs and other environmental attributes.

We propose that consideration be given to maintaining an elevation in Lake Powell to prevent the entrainment of these invasive species. If lake levels are high enough, this is clearly the best method to prevent entrainment. High lake levels help with better hydropower production with lesser flows. Higher lake elevations result in low cavitation problems in using the bypass tubes.

Sediment Accounting for HFE.

We concur with the efforts to better understand the changes and benefits of evaluating the added information about the sediment accounting window associated with the LTEMP High-Flow Experiment (HFE) protocol. Again, consideration should be focused on protecting the elevation of the lake for many reasons. Reclamation reported cavitation in the bypass tubes during the last HFE when the lake levels were low. The bypass tubes are an integral piece to the operations of the facilities and every effort to protect them should be considered.

Not only should conducting an HFE consider the sediment loads in the river but should consider the elevation of the lake. Any HFE during low lake levels, even with the use of the bypass, will promote the entrainment of these evasive species through the turbine tubes. Any operations that can cause entrainment should be avoided.

The impacts by droughts and low inflow of water years should be appropriately applied to protect the lake levels in managing the water flows between the two dams. The lake level is becoming a significant driver in decision for HFE and managing the evasive species. HFE should

not increase the risk of reaching minimum power pool. We should avoid any HFE during low elevation for the opportunity for entrainment of these evasive species.

In evaluating the impacts to power supply, the study should consider conducting Spring HFE during low consumptive months defined as shoulder months in the industry. There is a high likelihood of available replacement power, and costs tend to be lower. It has been reported that Spring HFEs could be beneficial to the trout fisheries and detrimental to the spawning of these evasive species if they are not established.

Summary

The DSEIS does not include critical data and analyses necessary for either the public to provide meaningful input or the Secretary of the Interior to make a fully informed decision to undertake untested experiments. Missing information includes but is not limited to impacts to (1) hydropower capacity, energy, and rates to WAPA customers including Tribal customers, (2) the impact to the electric grid for adequacy, reserves, emergencies, and reliability, (3) the physical infrastructure condition of routinely operating the bypass tubes for temperature control and impacts at Glen Canyon Dam, and (4) the Upper Colorado River Basin Fund impacted with replacement power. In addition, input from the independent fisheries expert panel, experiment decision-making process and implementation, off-ramps and mitigation measures must be found.

UMPA urges Reclamation to consider that the DSEIS should be revised to include all necessary information and analyses and reissued for public comment prior to issuance of a final SEIS or record of decision.

For the record, UMPA supports the finding and comments filed by Leslie James, CREDA and those comments and attachments filed by WAPA. Thank you for the opportunity to share our comments and concerns.

Respectfully,

Kevin Garlick,
UMPA – SVP Generation
AMWG Member