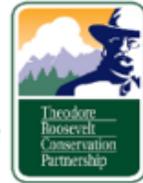




Audubon



American Rivers
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The Nature Conservancy 

September 1, 2022

Ms. Carly Jerla
Senior Water Resources Program Manager, Bureau of Reclamation

CRB-info@usbr.gov

Re: Joint Response to the Bureau of Reclamation's "Request for Input on Development of Post-2026 Colorado River Reservoir Operational Strategies for Lake Powell and Lake Mead Under Historically Low Reservoir Conditions."

Dear Ms. Jerla,

On behalf of our respective organizations, thank you for allowing us to provide input on the Bureau of Reclamation's "Development of Post-2026 Colorado River Reservoir Operational Strategies for Lake Powell and Lake Mead Under Historically Low Reservoir Conditions" as published in Federal Register Notice – 87 FR 37884 on June 24, 2022 (a/k/a Pre-Scoping Notice).

We appreciate the opportunity to help inform and shape the process for evaluating new Colorado River management strategies and operations through an environmental impact statement under the National Environmental Policy Act. Lessons learned since 2000 reveal that conditions have changed dramatically in the Colorado River Basin since adoption of the 2007 Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead (Interim Guidelines). As protracted drought continues and the effects of climate change in the Basin become more rapid and engrained, entities relying on the Colorado River system face increased individual and collective risk of system failures or water supply interruptions in the face of growing uncertainties. New strategies and operations are desperately needed to help alleviate increasing insecurity in Colorado River water supplies and to promote much needed climate resilience within the Basin.

The Pre-Scoping Notice clarifies the Bureau's request for input is intended to help inform its efforts to frame the procedural and substantive elements of the NEPA evaluation for future Colorado River management strategies and operations. It does not replace the formal NEPA process that the Bureau anticipates will begin in early 2023. With this recognition, the undersigned organizations jointly put forth the following comments on purpose and need, general guiding principles, key elements, specific process considerations, and substantive strategies to integrate into the upcoming NEPA effort. Each undersigned organization may provide additional comments and recommendations specific their respective interests at this pre-scoping phase and at appropriate times throughout the formal NEPA process.

1. **Purpose and Need Considerations:** Identifying the purpose and need for federal action is a key element in any NEPA process. Ever since the 2007 Interim Guidelines were finalized with an expiration date of Dec. 31, 2025, the Colorado River community has anticipated the need for additional federal action to address post-2026 operations for the Colorado River system. As the Pre-Scoping Notice states, circumstances have changed significantly since 2007. Experience and learning over the past two decades have demonstrated that the Colorado River system is increasingly unstable and unpredictable, and the Interim Guidelines have not been responsive or flexible enough to maintain a reasonable level of reliability in the available Colorado River supply. Going forward, the Purpose and Need for the formal NEPA process should reflect that operations to successfully manage the system must go beyond identifying tools and operations focused on enhancing existing water availability. They must be geared towards strategies and approaches that can:
 - a. help minimize the vulnerability of the Colorado River supply and the environment to the instability of Basin’s undeniable water supply and demand imbalance and the reality of unpredictable water futures;
 - b. recover the system if it fails or helps prevent system failure in a manner that protects the environment in the face of heightened uncertainty going forward; and
 - c. support the resilience of both the Colorado River operational and environmental systems.

2. **Guiding Principles for Directing the NEPA Process:** Determining appropriate operational strategies for managing the Colorado River system is important but also daunting. If not clearly defined and appropriately constructed, the possible size and scope of Reclamation’s investigation could overwhelm any useful purpose. To avoid confusion of expectations, muddling of results, or overall mission (or “scope”) creep, the NEPA analysis should be guided by overarching principles that help to inform the process. Key principles to include in such effort include recognition that federal strategies, actions, and operations should generally work to:
 - a. **Advance water security for people, economies, and the environment.** The Bureau recognizes in the Pre-Scoping Notice that “[h]ydrology uncertainty combined with uncertain future growth and water use [make it] impossible to assign probabilities to any given future. The basin is experiencing conditions of deep uncertainty.” In other words, drought and climate change have compromised our ability to provide credible levels of certainty and reliability in existing Colorado River water supplies. Water security, nonetheless, remains essential to water users and ecosystems throughout the Basin. Modeling of past hydrology is insufficient to help plan and inform future conditions. Advancing water security going forward requires operational strategies that consider more than the minimum, most and maximum probable hydrologies based on historic hydrology. They must also be informed by the full range of possible climate, hydrologic, soil and other conditions in the face of uncertain water futures that will allow the Colorado River Community to effectively plan for and adjust to changing conditions.

 - b. **Recognize and include all sovereigns from the outset.** The Colorado River Basin Tribes and Mexico hold rights to millions of acre-feet of Colorado River system water.

Workable solutions to the Basin's challenges will depend in significant part on how the NEPA process recognizes the importance of these sovereigns and includes them from the outset in of the development of the Post-2026 Colorado River operational strategies. Simply put, the NEPA investigation must bring the Tribal and Mexican expertise and perspectives to bear to meet the challenges we face going forward.

- c. **Consider Basin storage and hydrologic conditions on a more holistic basis.** In the years leading up to the Drought Contingency Plan and since then, Reclamation and the Basin States have increasingly considered not just strategies that modify the operations of Lakes Mead and Powell based on the relative elevations of those reservoirs and the volumes of water delivered from them or returned for ICS storage – i.e. the primary scope of the 2007 Interim Guidelines – but also operating approaches that consider the use of storage available within the larger Colorado River system, mid-term hydrological forecasts and trends, and cooperative efforts to reduce demands such as the System Conservation Pilot Program and the 500 Plus Plan. Although it will remain important to maintain a manageable scope for this NEPA process, it will be equally critical for the new Colorado River management approach to learn from the experience gained in recent years, look beyond the more limited scope of the 2007 Interim Guidelines, and consider system conditions, operational and management strategies that go well beyond review of historical hydrology and tweaking the relative allocation of available water and storage between Mead and Powell, the Basin states, and various Colorado River users.
- d. **Withstand more than just the next immediate crisis.** Circumstances since 2000 provide abundant evidence that the Basin's drought and climate change effects have been quicker and more extensive than expected. Actions going forward must move beyond mere responses to immediate circumstances and be bold enough to overcome vulnerabilities and allow people and ecosystems to recover from current conditions and adapt to possible extremes in the water demand and supply imbalance within the Basin. This requires more than simple tweaks to the current guidelines. It calls for a comprehensive look at system operations to develop robust approaches to variable circumstances for the years to come. We are particularly encouraged by Reclamation's proposed use of robust decision-making approaches in the NEPA process, including its emphasis on identification of vulnerabilities and strategies to address them in lieu of more traditional, scenario-driven approaches to planning.
- e. **Contribute to the Basin's resilience to drought and climate change.** New operational strategies will inevitably influence the extent to which the Basin can continue to function, let alone thrive, over time. Therefore, the strategies, elements and operations considered should, wherever possible, complement or contribute to (and not conflict with other efforts to) building much needed drought and climate change resilience in the coming years.
- f. **Recognize the environment is not a luxury that can be sacrificed.** The Colorado River is not just a plumbing system. Not only reservoir storage levels, but also the status of key ecosystems, watershed health and flowing rivers sound the alarm of impending crises in

the absence of comprehensive action. Moreover, policy makers and water managers increasingly recognize that workable solutions to Basin challenges require commitment and support from multiple sectors and diverse interests in the Basin. Full support will, not surprisingly, be premised in part on incorporating key resiliency strategies for nature, fish and wildlife, and the environment into river management policy considerations both within the NEPA process and in parallel actions.

3. **Important Elements of any Colorado River Operational Strategy:** At least five key elements will be necessary to successfully develop and implement post-2026 operational strategies in the Colorado River Basin. Rooted within each element are commitments to collaboration, credibility, compromise, and concern for the Colorado River and the community that depends upon and reverts it. The key elements are:
 - a. **Reality/Sound science.** Science must be the foundation for decisions and operations implemented throughout the Colorado River Basin. The NEPA analysis must get the math right. It must commit to being realistic about the situation across the entire Colorado River Basin, including the realities of climate-driven aridification and hydrologic declines that require greater alignment between water demands and available supply, the need for improved science around forecasting and modeling to guide smart decision-making, the policy constraints grounded in the realities of the law and precedent, and the future we all know is coming in an era of more severe impacts from continued drought and climate change. We have no choice but to be honest about the hydrology the Basin could potentially face, and to consider the full range of possibilities, not just focus on what we hope will occur.
 - b. **Flexibility.** Strategies and operations must incentivize and provide for flexibilities that allow all parts of the system to adapt instead of break. Such flexibilities should not be unfettered. Rather, they can be measured to fit within an agreeable legal, policy and management framework for operating the system. The flexibility we have exercised over the past decades (e.g., Intentionally Created Surplus, Intentionally Created Mexican Allotment, Binational Intentionally Created Surplus, Drought Response Operations, System Conservation, etc.) has kept the Basin out of an even more perilous situation than otherwise would have occurred. The new strategies and operations must build on that approach by pursuing innovative policies that will recognize and responsibly address the various interests and needs on the river going forward, including the environment.
 - c. **Balance.** For the system to operate successfully, water challenges and opportunities must be shared across the Colorado River Basin. If there is an imbalance of pain or opportunity for one state, water use sector or group of stakeholders at the expense of others, the incentive to posture and litigate will subsume and overcome the management system. Working within the intent and purpose of the Compact and the broad range of other existing agreements, the NEPA analysis must identify strategies that help to avoid “gaming the system” and promote a sharing of the burdens and benefits throughout the Colorado River community.

- d. **Transparency and Inclusivity.** Leadership by federal, state, *and tribal* governments is critical to an effective management framework. But these entities cannot operate in a vacuum to balance the needs and interests of the entire Basin community. The credibility and longevity of effective programs and operations also depend on the extent that each of these governments can exercise their respective roles as public water rights holders, conveners, guardians of a transparent and inclusive process, science and indigenous knowledge providers and administrators of effective programs to integrate perspectives from the full range of affected stakeholders into future resource management and decision-making processes.
- e. **Integrity.** New operational strategies for the Colorado River system must be developed honestly and in good faith. They must be identified and implemented with assertive, dedicated, and mindful leadership as well as ownership of the issues to identify and advance creative solutions going forward. The Basin needs us all to be serious, engaged, and committed to a successful NEPA process.

4. Specific Process Considerations:

- a. **Honor Basin Tribes' roles in their sovereign capacities.** As the Pre-Scoping Notice recognizes, Basin Tribes are indispensable members of the Colorado River community and sovereigns in their own rights. They must be afforded the opportunity to participate to develop comprehensive solutions to the Basin's water challenges. As such, federal agencies should work with Basin Tribes now to identify a mutually agreeable process for coordinating and identifying respective Tribal needs and perspectives into future operational strategies and the decision-making process.
- b. **Build upon the relationships between the US and Mexico on Colorado River matters.** River policies and decision-making are not done in a vacuum; they impact the rights and interests of water users and the environment within and beyond U.S. borders. Water security in the Basin will not be achieved unless actions to manage the system through emergent threats and long-term drought and climate change conditions recognize and respect (do not undermine/set back) Mexico's interests and needs in the Colorado River. This includes accounting for improving flows in the Cienega de Santa Clara and for restoring the Delta system's hydrologic connectivity and community values over the long-term. We appreciate Reclamation's acknowledgement in the Pre-Scoping Notice that working through a parallel planning effort with Mexico is important, and strongly encourage an approach that ensures the binational process both moves forward with (to the extent feasible) and meaningfully informs the development of management alternatives in the domestic NEPA process – both as a means to better coordinate domestic and international management of the River, and to ensure that the NEPA process includes sufficiently broad analysis to anticipate binational management initiatives and avoid limiting the scope of what may be possible in a future Minute.

c. **Make engagement and participation from a diverse group of stakeholders meaningful.**

The integrity of Reclamation's proposed robust decision-making approach will also rely on engaging stakeholders outside of established processes for consensus-building within participating state and tribal governments. If we are going to change the management of the Colorado River in ways that increase its resilience to disruption, we also need to consider institutional approaches for identifying and addressing system risks that do not depend only on existing, established governance mechanisms, information channels, and consensus-building processes that are already struggling to keep up with the rate and scale of change in this system. We are encouraged by the express references to stakeholder coordination, consultation, and outreach in the Pre-Scoping Notice. They are the important steps to ensuring the rights and interests of the Colorado River community are sufficiently considered and included in the new Colorado River management strategies. As such, the process should, among other things:

- i. Provide a mechanism for keeping the interested public informed of progress and developments from the NEPA effort. This includes things like: (1) a dedicated website that contains relevant information, identifies key contacts, and provides a clear calendar for impactful communication and feedback opportunities; (2) a mechanism for broadcasting important updates and notices of meetings, conferences, and webinars (e.g., through social media among other sources); (3) Consultations, public meetings and webinars to provide substantive updates.
- ii. Involve a diverse group of stakeholders to the fully encompass the complete set of relevant Colorado River interests and perspectives in the NEPA analysis. This includes providing forums (in relevant and appropriate languages) for various groups to interact and discuss options and considerations going forward. This may be particularly important in terms of cultivating the identification of vulnerabilities and solutions relevant to a robust decision-making process, which should take advantage wherever possible of local stakeholder knowledge to better inform the understanding of risks and issues that can result from conditions that may develop in the face of increasing uncertainty. It will require scheduling outreach at relevant, timely intervals to provide a reasonable opportunity for gaining an understanding of the NEPA analysis. It will also require confirmation that the Bureau is willing to make itself available to interested stakeholders (and not just one group or water user sector) to inform the various the elements of the NEPA investigation.
- iii. Provide for iterative discussions and feedback from stakeholders with a proven record of problem-solving and collaboration. Stakeholders (like the undersigned conservation groups) who have a demonstrated commitment and willingness to address the Basin's water challenges should be afforded opportunities to work directly with state, Tribal and federal agencies on the NEPA efforts. Specifically, committed stakeholders who have shown a willingness to promote solutions

should be allowed to better understand the details of proposed NEPA investigation as it develops, have iterative dialogue, and provide substantive suggestions for consideration in development and assessment of the NEPA investigation. As we did in 2007, the undersigned NGOs fully intend to invest significant resources and analytical effort in the development of alternatives and analysis during the preparation of both the Draft and Final EIS.

- d. **Engage with dedicated stakeholders to develop an informative range of strategies.** In previous Colorado River NEPA processes, conservation groups who were committed to the process introduced an alternative that was incorporated into the overall analysis and parts of which were subsequently integrated into the Preferred Alternative. We look forward to working with the Bureau and other stakeholders again to develop one or more alternatives that help explore the full range of reasonable strategies and allow the Colorado River community to pinpoint useful and robust operational and decision-making frameworks for the Basin going forward. This process may call for more than singling out a consensus driven (Preferred) alternative at the draft stage of the Environmental Impact Statement. Considering deep uncertainties in future Colorado River hydrology, and the need for multiple strategic considerations, it may be advisable for the Bureau to work with and allow for engaged stakeholders to explore a broader range of creative and useful opportunities than might otherwise be conducted in other NEPA investigations, or in developing the 2007 Interim Guidelines.

5. **Specific Strategy Considerations:**

- a. **Develop a modeling framework that will provide a comprehensive analysis.** To capture the full spectrum of realistic potential futures for which the Colorado River community needs to prepare, the NEPA investigation needs to include modeling that:
 - i. Incorporates best available data and methodologies that will allow us to anticipate possible operations over at least a 20-year time horizon. Such data needs to be premised on more than the full historic record, tree ring studies and/or global climate models that are extrapolated to project present and future conditions.¹ They also have to consider and reflect the unprecedented trends in aridification (temperature and precipitation) that fully inform useful operations regardless of the deeply uncertain conditions confronting the Colorado River Basin.² This will require, among other things, examining operations at any and all storage elevations that are more reflective the of dry hydrology that the Basin is experiencing (e.g. 2000-2004, 2020-2022) in conjunction with deeply uncertain Colorado River hydrology. Only then can the Colorado River community stop waiting for, or modeling, the availability of water that is not there and anticipate and plan for likely conditions in the Basin.

¹ These hydrologies included the 2012 Colorado River Basin Water Supply and Demand Study, Observed Record or Historic 1906-2021 record, Paleo Resampled, Paleo Conditioned, Downscaled Global Climate Model – CMIP3.

² Hydrologies that incorporate the effects of increasing temperatures, aridity, and associated effects on soil moisture and decreasing runoff such as the Udall Hot Drought hydrologies.

- ii. Considers a sufficiently comprehensive geographic area, relevant system functions, and range of impacts. As the Colorado River system is increasingly stressed, impacts are becoming more pronounced and localized. We already know reservoir management strategies can directly influence conditions throughout the Basin. However, recent years have also revealed that actions and conditions in various parts of the Basin can affect management of the federal reservoir systems. A NEPA analysis that informs useful operations going forward will strongly benefit from a modeling framework and metrics that: (a) extend the focus and analysis beyond storage conditions and static trigger levels at Lakes Powell and Mead; (b) extend beyond those developed for the Basin Study; and (c) consider benefits and impacts of essential environmental resources.

For example, parallel programs that help improve Basin conditions (i.e., restore watershed health, improve federal land management, and Grand Canyon conditions) can enhance water availability, improve water quality and/or reduce risks associated with water-related disasters and climate change such as wildfire and drought. In so doing, they may also restore lost hydrologic function to watersheds, underlying groundwater resources, and surrounding communities that could inform and affect overall operations within the Basin. In other words, feedback from successful parallel projects could influence Basin operations. The Bureau, therefore, may want to consider how parallel actions could be integrated into the modeling framework of the post-2026 NEPA analyses.

- iii. Incorporates the ability to include additional rules for flexible management tools and systems in both the Upper and Lower Basins. New mechanisms that allow the Colorado River community to manage water supplies more flexibly will be critical to enhancing water security in the Basin. Just as the Intentionally Created Surplus mechanism was built into reservoir management and system operations under the 2007 Interim Guidelines, so too should new and updated mechanisms to enhance flexibility throughout the Basin be incorporated into the NEPA analyses for post-2026 operations. From an ecological context, part of this flexibility will necessarily involve efforts to restore and maintain environmental values at levels that exceed just the minimums required to protect endangered species or meet other mandatory limits; doing so will help to ensure that these values can absorb inevitable impacts from changes to water management in response to extreme conditions.
- iv. Ensure the modeling framework avoids or disincentivizes efforts to take advantage of the strategies and operations for the benefit of some at the expense of others. Updated strategies and operations considered in the NEPA investigation must also incorporate useful guidance and rulesets to identify how

the Colorado River community can anticipate and plan for how the strategies and operations will be implemented.

- b. **Include key environmental considerations (metrics and values) that can inform the decision-making structure.** To safeguard environmental conditions that provide foundational functionality for the Basin, the Bureau's NEPA investigation should identify the benefits and effects of strategies and operations on:
- i. **Ecological integrity and functionality within the Basin.** This will require consideration of operations that, among other things, advance watershed health, avoid the dry up of key river reaches and systems and incorporate maintenance of flowing rivers and important aquatic habitats in decision-making considerations. This may be accomplished by, among other things, considering direct flow metrics (e.g., average flow, peak flow, minimum flow, and water deliveries to Mexico), derived flow metrics (e.g., salinity, stream temperature, sediment transport), and resources-specific metrics (e.g., native and invasive fish, aquatic parasites, vegetation).
 - ii. **Effective recovery programming and species protection.** Programs like the Upper Colorado River Endangered Fish Recovery Program, San Juan River Basin Recovery Implementation Program, Long-Term Experimental and Management Program, and Multi-Species Conservation Program will be important to the overall functionality of the river system as it continues to experience changes due to climate conditions. It will, therefore, be important to continue (and most likely expand on) the existing programs and apply innovative solutions that provide for continued protection, mitigation and recovery of species and habitats at a broad scale within the Colorado River Basin over the both the short and long-term.
 - iii. **Stability of interconnected systems.** The Colorado River system cannot effectively operate to stabilize conditions at the expense of other watersheds going forward. Additionally, understanding the demands and constraints of adjacent watersheds/systems could directly or indirectly impact supplies (i.e., transmountain or transbasin diversions) and inform the stability of the Colorado River basin going forward. As the basin works to implement river policies and management decisions that will sustain the system in the short and long-term, it will be important to consider and avoid harm to systems that are interconnected and/or dependent on, but separate from, the consideration of the annual water supplies within the Colorado River Basin. Such interconnected systems, include: (a) Significant groundwater overdraft; (b) Grand Canyon National Park; (c) San Juan Chama/Rio Grande; (d) other transbasin diversions; and (e) Salton Sea.

- c. **Important Parallel Processes to Synchronize with NEPA process:** The post-2026 management strategies and operations cannot and will not be the sole answer to all the issues afflicting the Colorado River Basin. Parallel activities, in addition to those contemplated by the Bureau's NEPA analyses, will also be critical to the Basin's overall sustainability. The NEPA analyses should, to the extent possible, anticipate tools that would be valuable to these parallel processes to ensure the longevity of workable operations going forward. Some key parallel activities to consider include concerted actions regarding:
- i. Mexico/Delta – Post-2026 operational strategies and Minutes to the 1944 Water Treaty are interrelated. One will not be able to fully work without the other. Maintaining water and life within the system will depend in part on how binational relationships and opportunities will be considered and cultivated as throughout the NEPA processes.
 - ii. Grand Canyon – The Grand Canyon is one of the world's most iconic landscapes with diverse ecosystem, biological communities, and scenic vistas. Along with its tributaries, the Colorado River has shaped the complex natural and cultural histories of the park and surrounding region. Policy decisions on whether and how to distribute water between the Upper and Lower Basin will inevitably implicate and impact this world renown landscape.
 - iii. Salton Sea –The Imperial Valley's participation in innovative Colorado River strategies is imperative to the successful development of workable solutions to a dwindling water supply in the Basin. Such participation, however, will only be secured by identifying a workable path for addressing the impacts to public health and wildlife associated with reduced flows to the Salton Sea.
 - iv. Groundwater – As the availability of Colorado River water decreases the focus on groundwater supplies are likely to increase. Mining groundwater, however, is not a sustainable solution for the Basin. The Impacts of NEPA alternatives on groundwater supplies will remain a critical part of the overall analysis for developing workable strategies and operations for the Basin.
 - v. Access to clean water – Access to reliable, clean, and drinkable water is an essential human need. However, it is not ubiquitous in the Colorado River Basin, especially among tribal nations. Post-2026 strategies must operate in a manner to promote reliable access to clean drinking water and adequate sanitation for all Tribal members along with other Colorado River Basin residents.
 - vi. Resilience building activities – Experience over the past 20 years reveal that the scale and pace of climate-related changes in the Colorado River Basin are affecting availability and reliability of water supplies for agricultural operations, rural and urban water demands, energy use and watershed health. Post-2026

operational strategies for the Colorado River must work in tandem with, and not impede, ongoing efforts to build resilience and adapt to hotter, drier conditions in the West.

- vii. National historic preservation considerations – The Colorado River Basin’s cultural resources are an integral part of the Basin’s history and identity. Consideration of how to preserve these resources should not be ignored as the Colorado River Community develops post- 2026 operational strategies for the Basin.
- viii. Satellite agreements linked to Colorado River management - Agreements that are separate from but linked to the Interim Guidelines, including (e.g., Drought Response Operations Plans, Demand Management and Lower Basin Operations under the Upper and Lower Basin Drought Contingency Plans as well as the System Conservation Pilot Program will influence strategies and operations in the post-2026 world.

We value the opportunity to inform the processes for developing the NEPA analyses for the post-2026 Colorado River management strategies and operations. We look forward to working together to inform the Colorado River Basin’s future management decisions in a manner that considers the full Colorado River community and works to help establish water security for individual, communities, economies, and ecosystems within the Basin.

Signed:

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