



March 2, 2026

United States Bureau of Reclamation
Attn: BCOO-1000
P.O. Box 61470
Boulder City, Nevada 89006

Via email to crbpost2026@usbr.gov

Re: Request for Comment on Draft Environmental Impact Statement on Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead – 91 FR 2131

The Arizona Municipal Water Users Association (AMWUA) appreciates the opportunity to respond to the U.S. Bureau of Reclamation’s (Reclamation) request for comments in the Draft Environmental Impact Statement (DEIS) for the Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead, published in Federal Register Notice 91 Fed. Reg. 2131 (January 16, 2026). AMWUA is comprised of ten municipalities in the Phoenix metropolitan area who collectively provide water to over 3.7 million residents, more than half of Arizona’s population. The AMWUA member cities – Avondale, Chandler, Gilbert, Glendale, Goodyear, Mesa, Phoenix, Peoria, Scottsdale, Tempe – each hold a subcontract for Colorado River water delivery through the Central Arizona Project (CAP) system and collectively receive over 470,000 acre-feet annually, more than 40% of CAP’s total deliveries in recent years.

Water is the lifeblood of the AMWUA cities. The Colorado River is a critical supply to sustain the communities our providers serve and that supports homes, schools, higher education institutions, hospitals, high-tech industries and manufacturers and much more throughout the Valley. We concur with the statement in the DEIS that Colorado River supply, and those that depend on it, face significant risk, and that past agreements and actions have not been sufficient to prevent declines in Lake Mead and Lake Powell. However, the alternatives evaluated in the DEIS fail to adequately consider serious issues for large municipal water providers like AMWUA cities. Furthermore, AMWUA concurs with and supports those comments submitted on the DEIS by CAP and the Arizona Department of Water Resources (ADWR).

AMWUA supports a consensus inter-state and international agreement, with engagement with tribal sovereigns, as the basis for post-2026 operations on Lake Powell and Lake Mead. Whether or not the Basin States offer a consensus alternative, we urge Reclamation to consider other pathways besides those alternatives considered in the DEIS. These alternatives, and Reclamation’s related evaluations thereof in the DEIS, are inadequate and present unacceptably high risks to AMWUA cities for the following reasons.



I. The DEIS fails to consider the local, state, regional, and national economic consequences stemming from any of the alternatives' impacts on AMWUA cities.

The economic impacts of any of the considered reductions to CAP under the DEIS alternatives will have enormous negative consequences for the national economy. Despite this, the DEIS completely fails, not only to analyze, but to even mention these consequences. Phoenix alone is the fifth largest city and the eighth fastest growing city in the United States. The Phoenix metro area (including the ten AMWUA cities) is the tenth largest in the country and sixth fastest growing. Six AMWUA cities are in the top 100 largest cities in the United States (Phoenix, Mesa, Gilbert, Chandler, Scottsdale, and Glendale). The DEIS does not consider the socio-economic repercussions to Arizona and to the country if any of those ten water providers are unable to meet the demands of any portion of the 3.7 million residents they collectively serve.

In addition, this area is home to major defense and aerospace industries, including Northrop Grumman, Honeywell, and Boeing. It is a major microchip and semiconductor manufacturing region, including major facilities for Taiwan Semiconductor Manufacturing Company and Intel, critical components for products ranging among smart phones, household appliances, and electric vehicles. It is a major computing hub, with over 140 data centers critical for the support and development of data storage and artificial intelligence. Central Arizona is a major financial center, hosting companies like Wells Fargo and American Express. Phoenix is the headquarters for Freeport-McMoRan, one of the global leaders in copper and gold mining. Central Arizona is also a major hub for innovations in the healthcare industry, including major employers like Banner Health, Phoenix Children's Hospital, and Dignity Health. These industries, companies, and institutions provide for our national defense, telecommunications and transportation infrastructure, scientific advancement, improved healthcare, computing capacity, and economic development. These industries require significant water supplies for manufacturing, energy generation, cooling, and support hundreds of thousands of employees in the surrounding communities. Any CAP shortages would negatively impact the municipal providers serving these industries and communities, with significant negative impacts on our national economy and national security.

This critical and growing economy will falter if these facilities face significant water curtailments, as will the myriads of businesses – from construction to catering – that support these industries. Reclamation fails to even raise these questions, much less attempt to consider them, in the DEIS. Under 42 U.S.C. § 4332(C)(iii), in the DEIS, Reclamation is required to consider “a reasonable range of alternatives to the proposed agency action, including an analysis of any negative environmental impacts of not implementing the proposed agency action in the case of a no action alternative, that are technically and economically feasible, and meet the purpose and need of the proposal.” It is impossible to rigorously explore and objectively evaluate these alternatives without consideration of the impacts on the communities and industries that depend on



Colorado River deliveries from CAP. Reclamation has failed to meet these regulatory obligations by ignoring the economic impact of the DEIS alternatives on the ten AMWUA cities.

If Reclamation's primary duty in the Colorado River were boiled down to one critical aim, that aim would be to avoid dead pool in critical reservoirs. Yet every alternative proposed in the DEIS has an unacceptably high risk of dead pool, and no analysis whatsoever regarding the impacts of dead pool on municipal and industrial waters users in Central Arizona, let alone the impact to the national economy. Furthermore, the DEIS fails to analyze the impact to municipal and industrial users as third party beneficiaries of tribal water leases or for tribal uses of their surface water sources to recharge shared aquifers. Curtailments to the CAP will impact tribal, industrial, and municipal users, and it is impossible to impact one without impacting the others. This important relationship is left unmentioned and unexamined in the DEIS.

The National Environmental Policy Act (NEPA), which creates the EIS requirements, requires federal agencies like Reclamation to consider the "reasonably foreseeable environmental effects of the proposed agency action."¹ Under 40 C.F.R. § 1508.1(i)(4), "effects" are defined to include "aesthetic, historic, cultural, economic, social or health" impacts on communities. NEPA requires Reclamation to fully analyze the impacts of water curtailments to AMWUA cities caused by any alternative impacting CAP supplies. Indeed, the scope of the impacts to AMWUA cities and those served by those municipalities is so broad that Reclamation should have included at the very least the U.S. Department of Commerce and the U.S. Department of Defense in the preparation of the DEIS, because the impacts of curtailment to CAP have such profound implications for national security and for the national economy.

II. The DEIS fails to account for the environmental effects of potential CAP cuts under any of the proposed alternatives.

As noted above, Reclamation has the obligation to consider the foreseeable environmental impacts of the proposed alternatives in the DEIS.² Nevertheless, Reclamation fails to consider many critical environmental consequences associated with its proposed alternatives in the DEIS.

The DEIS does not analyze the role CAP water has played in helping the Phoenix-area overcome historic groundwater overdraft or the potential environmental impacts related to groundwater use caused by reduced CAP deliveries. Central Arizona aquifers are effectively a non-renewable resource. Overdraft—pumping more groundwater than is replenished—has been a persistent challenge in Arizona for decades. One condition that the federal government placed on Arizona to construct CAP and receive Colorado River water from this 336-mile infrastructure water was the adoption of the 1980 Groundwater Management Act, which regulated groundwater pumping

¹ 42 U.S.C. § 4332(C).

² *Id.*



in and around metropolitan areas. CAP water has been vital in helping the Phoenix-area achieve this law's aim of stable groundwater levels. Both direct deliveries of CAP water to offset groundwater pumping and underground storage have stabilized aquifer levels in the Phoenix area. If Colorado River water deliveries from CAP are significantly reduced, the Phoenix area will once again be faced with groundwater overdraft and the associated environmental problems that will result, such as fissuring, land subsidence, and aquifer compaction.

Reclamation makes no effort to analyze water quality impacts from reduced CAP deliveries in the DEIS. CAP water deliveries have proven beneficial in addressing groundwater contamination. There are 20 sites in the Phoenix-area where groundwater was contaminated by historic industrial usage. Since groundwater pumping has stabilized with CAP deliveries, these plumes have remained in place. However, an uptick in pumping brought about by CAP reductions could cause these plumes to migrate, which will lead to increased groundwater contamination and related environmental impacts, including increase water treatment costs for AMWUA cities.

Although it is technically untreated, CAP water is considered higher quality water. Municipal water providers routinely blend CAP water with lower quality water so that it can be utilized without jeopardizing consumer health while saving on infrastructure costs. Additionally, many municipal providers will need to pump more groundwater to offset reductions in CAP deliveries. Depending on the depth of pumping, this groundwater may have higher levels of contaminants such as arsenic which municipal providers will need to treat. Such contaminants could also include emerging constituents of concern, including so-called "forever chemicals" like PFAS, with related health impacts and increased treatment costs. As such, shortages in CAP deliveries will impact drinking water quality in Central Arizona, which is left unmentioned in the DEIS.

The DEIS also makes no mention of potential air quality impacts associated with water curtailments. The Phoenix metropolitan area has struggled with nonattainment for airborne particulate matter 10 microns or less in diameter (PM-10) under the Clean Air Act. Short-term exposure to PM-10 can worsen respiratory conditions, such as asthma and chronic pulmonary disease, which may require hospitalization. One major source of PM-10 is dust. If severe CAP reductions occur, continued fallowing of farmland combined with decreased landscape watering will result in desiccated earth and more dust pollution.

In the same vein, the DEIS fails to analyze wildlife impacts or impacts on access to shade. The DEIS does not analyze the impacts on wildlife in the Phoenix area caused by reduced landscape watering. For example, several cities have actively planted and maintained trees in public parks and thoroughfares. In addition to providing shade necessary to mitigate heat island effects and providing for cooler temperatures to protect human health, these trees are a habitat for numerous species of birds and other fauna. If cities are forced to cut landscape watering due to reduced CAP deliveries, many of these trees will die and will have adverse impacts on animals and human health.



III. Reclamation Misinterprets the Scope of its Authority in the Law of the River.

Reclamation insists that, in the absence of a consensus inter-state agreement on the Colorado River, it only has authority to implement the Basic Coordination Alternative. This assumption is both an overstatement and understatement of Reclamation's authority. Reclamation must implement the Law of the River as established by Compact, statute, regulations, and agreements. As discussed in more detail below, the Law of the River does not give Reclamation the authority to impose water reductions on Arizona at the scale proposed in the Basic Coordination Alternative. As noted in *Arizona v. California*, such power vested in a federal agency over the water resources of millions raises "the gravest constitutional doubts".³

At the same time, Reclamation insists it has no power to impose any kinds of reductions on Upper Basin states. As discussed in more detail below, that is simply not true, either from a legal standpoint or a practical operational standpoint. Reclamation owns and operates infrastructure in the Upper Basin and can use that power to impose water reductions on the Upper Basin and ensure deliveries to the Lower Basin as required by the Colorado River Compact and subsequent legislation, including the 1968 Colorado River Basin Project Act (CRBPA).⁴ For reasons left unexplained in the DEIS, Reclamation assumes sweeping, potentially unconstitutional powers to impose reductions on the Lower Basin without an agreement but considers itself impotent to require anything of the Upper Basin. It is little wonder that Reclamation has failed to lead the Basin States toward a consensus agreement when it insists on requiring everything from some and nothing from others. Such an inequitable approach violates the law and is bound for conflict.

IV. The DEIS fails to address foreseeable violations of the Colorado River Compact delivery obligations or whether its alternatives might result in violations of those obligations.

Article III of the Colorado River Compact apportions 7.5 million acre-feet (MAF) per year to the Upper and Lower Basins, with an additional one million acre-feet apportioned to the Lower Basin. Article III(d) further provides that the Upper Basin "will not cause the flow of the River at Lee Ferry to be depleted below an aggregate of 75,000,000 acre-feet for any ten consecutive years", as well as the Upper Basin's share of the obligation owed to Mexico. NEPA requires Reclamation to include "reasonably foreseeable effects" in the considerations of its actions.⁵

It is reasonably foreseeable that the Upper Basin will fail to meet its obligation under the Compact soon, and how Reclamation responds to a Compact violation is relevant information. Despite these clear statutory requirements related to sharing highly relevant information related to this

³ 373 U.S. 546, 626 (1963).

⁴ 43 U.S.C. § 1501 *et seq.*

⁵ 42 U.S.C. § 4332(2)(C)(i)



reasonably foreseeable condition, the DEIS fails to include any consideration of the possibility of a Compact violation by the Upper Basin. Any alternative considered by Reclamation must comply with the Compact, and yet the DEIS fails to consider whether any of its proposed alternatives would result in a violation of the Upper Basin’s obligations under the Compact.

V.The DEIS reflects a change in Reclamation’s interpretation of the Colorado River Basin Project Act and Long-Range Operating Criteria without explanation.

Under Section 602(a) of the CRBPA, Reclamation must comply with the Colorado River Compact and the 1944 Treaty with Mexico, and develop “criteria for the coordinated long-range operations” of the federal reservoir system.⁶ In 1970, Reclamation promulgated the “Long Range Operating Criteria” (LROC) as mandated by the CRBPA and as later amended in 2005.⁷ Contrary to the suggestions in the DEIS, the CRBPA and LROC created a specific order of priorities and criteria for maintaining minimum releases from Lake Powell.

A federal agency, like Reclamation, cannot make changes to longstanding policy *sub silentio*, but must explain such changes.⁸ Reclamation does not explain how or why, after years of acknowledging the priorities and criteria established in the CRBPA and LROC, it has now decided that they provide no specific guidance but only broad factors applicable at Reclamation’s discretion. If Reclamation insists on such a sudden and radical departure, it must provide an explanation that is entirely lacking in the DEIS.

VI.The DEIS fails to consider good faith proposed alternatives from the Lower Basin.

As noted above, Reclamation is required to evaluate “a reasonable range of alternatives” for the management of the Colorado River post-2026.⁹ The Lower Basin submitted a suggested alternative in March of 2024, which represents a consensus of the three Lower Basin states for the post-2026 management of the Colorado River Basin, including significant reductions proposed by those three states. Despite its support from three states and the significant reductions and management criteria proposed by the Lower Basin in March 2024, the DEIS completely fails to evaluate that proposal as a reasonable alternative. Taking certain aspects of that proposal and separating them out into parts of other alternatives is not the equivalent of taking that proposal seriously as a stand-alone alternative. The DEIS is inadequate and falls short of the standards established in NEPA by failing to fully consider the Lower Basin’s March 2024 proposal as its own potential management alternative.

⁶ 43 U.S.C. § 1552(a)

⁷ 70 Fed. Reg. 8951 (June 10, 1970); 79 Fed. Reg. 15873 (March 29, 2005).

⁸ *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502 (2009).

⁹ 42 U.S.C. § 4332(C)(iii)



VII. The DEIS Evaluation of the “No Action” Alternative does not meet the requirements of NEPA.

NEPA requires federal agencies like Reclamation to evaluate the consequences of taking no action as an alternative.¹⁰ The U.S. Department of the Interior’s (DOI) own guidance on NEPA compliance provides that the “no action alternative” function as a “baseline against which the effects of a proposed action (and any action alternatives) may be measured.”¹¹ Despite this requirement and agency commitment to comparative analysis, the DEIS fails to treat the “no action alternative” as a viable baseline, in part because of the expiration of the current shortage sharing regime in the Colorado River Basin after 2026. To provide but a few examples, this requires a comparative analysis that includes the expiration of the existing regime and the subsequent implementation of LROC with required deliveries at Lee Ferry by the Upper Basin.

VIII. The DEIS fails to equitably distribute the possibility and burdens of shortage across both the Upper and Lower Basins using its authority over CRSP storage in the Upper Basin.

No alternative suggested in the DEIS proposes any mandatory reductions to the Upper Basin, with the entirety of the required cuts under all alternatives imposed on the Lower Basin, and in particular, on CAP. The ostensible rationale for this approach is that Reclamation lacks authority to impose mandatory reductions on the Upper Basin or require specific deliveries from the Upper Basin and that federally constructed storage in the Upper Basin is solely for the benefit of the Upper Basin. This rationale is wrong.

The Colorado River Storage Project Act (CRSPA) authorized the construction and operation of storage units in the Upper Basin.¹² The legislative history of CRSPA clearly demonstrates that the intent of the project was, in part, to satisfy the Upper Basin’s delivery obligations at Lee Ferry.¹³ Reclamation has the authority to operate this federal infrastructure to ensure compliance with the Compact, including the Upper Basin’s delivery obligations.¹⁴ Despite Reclamation’s clear authority, the DEIS fails to even consider how it might operate CRSP storage units consistent with delivery obligations under the Compact or how it might use that authority to equitably spread shortage obligations across both basins. Any approach to sharing the burden of responding to shortage on the Colorado River must include mandatory conservation and curtailments in both the Upper and the Lower Basins. In addition to owning and operating CRSP storage units, Reclamation claims emergency authorities in the DEIS to reallocate water and then disclaims any power or responsibility to make such reallocations equitably to avoid a very real potential

¹⁰ 42 U.S.C. § 4332(2)(C)(iii).

¹¹ DOI Handbook of NEPA Procedures, Appendix 3, §4(2) (June 2025)

¹² 43 U.S.C. § 620 *et seq.* (1956).

¹³ See, e.g., H.R. Doc. No. 83-364 (1954).

¹⁴ 43 U.S.C. § 620.



emergency of dead pool in Lake Mead. Furthermore, while Reclamation claims emergency powers, it declines to explain in the DEIS what it would do in the case of such an emergency, including in the case of dead pool on Lake Mead. Reclamation must explain how and when it would exercise its emergency powers, and much take responsibility to deploy those powers toward an equitable sharing of the burden of shortage across both basins. The DEIS fails to even consider what must be the bare minimum acceptable arrangement – if there is not enough for all, then all must take at least a little less.

While the DEIS reference to conservation pools for the Upper Basin is welcomed and worthy of consideration, the DEIS provides too little evaluation of the legality of this approach and the logistical and practical obstacles to its implementation. The DEIS also fails to properly view the CRSPA reservoirs in the Upper Basin for what they are and have always been intended to be – the Upper Basin’s conservation pool and a tool for meeting its delivery obligation.

IX. The DEIS fails to analyze any alternatives that would protect Lake Powell.

Reclamation has prioritized the protection of Lake Powell with a a minimum elevation of 3490’ to ensure preservation of critical infrastructure. The operation of Glen Canyon Dam should protect that infrastructure while also ensuring energy generation and physical releases of water necessary to comply with Colorado River Compact delivery requirements. None of the alternatives evaluated in the DEIS contemplate the potential need for releases from Lake Powell at elevations below 3490’. The DEIS must consider such operations of Glen Canyon Dam, including engineered improvements necessary to protect and improve that structure, and the role that such releases from Lake Powell may play in ensuring delivery requirements under the Colorado River Compact. The failure of the DEIS to fully consider releases from Lake Powell and the storage units operated by Reclamation under CRSPA as a means of satisfying obligations under the Colorado River Compact make any alternatives considered under the DEIS unlawful and the DEIS inadequate under NEPA.

X. The DEIS incorrectly assumes CAP junior priority by ignoring constitutional limits and the national obligation to Mexico on the Colorado River.

Any federal law that discriminates between states and treats states as anything other than equal sovereigns with each other is constitutionally suspect.¹⁵ Furthermore, the anti-commandeering doctrine limits Congress’ authority to commandeer state resources even with state consent.¹⁶ Any portion of the Law of the River applied in a way that permanently treats Arizona in an unequal way as compared to other states violates this principle of the constitution and fundamental tenets of federalism. The DEIS fails to evaluate the risks inherent in placing one state

¹⁵ *Shelby County v. Holder*, 570 U.S. 529, 542-45 (2013)

¹⁶ *New York v. United States*, 505 U.S. 144, 182-83 (1992)



as a junior compared to others. Instead, the DEIS appears to assume that Arizona’s history of concerns regarding possible junior status, or even its acceptance of junior status in the past, somehow affirms that status and cures it of its constitutional infirmity. That is not the case, and the DEIS fails to recognize that junior priorities vis-à-vis co-equal sovereign states is unconstitutional and cannot be relied upon in any proposed alternative.

The statute upon which the DEIS relies in assuming Arizona’s junior status is the very statute that confirms that such status would be unlawful. Section 202 of the CRBPA provides that the water owed to Mexico under the 1944 Rivers Treaty is a “national obligation.”¹⁷ This is consistent with Article III(c) of the Colorado River Compact, which requires the Upper and Lower Basins to share in the responsibility to provide for any treaty right to water held by Mexico. Any interpretation of implementation of the Law of the River that places the burden of satisfying Mexico’s right on the shoulders of one state, or one part of one state (like those that rely on the CAP) is contrary to established law. Indeed, the failure to include the U.S. Department of State in the analysis of the DEIS and to effectively engage with Mexico on how our neighboring nation might share in shortage represents another critical flaw in the DEIS. Without such engagement and inclusion, it is impossible to know the nature of the national obligation to Mexico, which again, cannot be placed on the shoulders of a small group of Americans. We do not expect the state of Oklahoma and the Cherokee Nation to solely pay for the Coast Guard. We do not expect the City of Detroit and the State of Michigan to only equip the U.S. Navy. These are national obligations borne by the nation, not a segment thereof. The DEIS wrongly assumes that it has the authority to ignore a national obligation created by statute, treaty, and compact, and instead turns that broad national obligation into a burden placed narrowly onto a small group of citizens in one state.

XI. Conclusion

In summary, the DEIS fails to meet the requirements of NEPA, proposes inequitable alternatives contrary to established law, and ignores in its evaluation the potential impacts of Colorado River shortage on the cities in Central Arizona. Critically, the DEIS provides no information on what Reclamation would do in the event of dead pool in Lake Mead, despite noting that risk. The catastrophic environmental and economic consequences of dead pool in Lake Mead are too large and too likely for Reclamation to note but fail to even discuss its possible responses. Reclamation’s most important responsibility should be to avoid dead pool and provide clear guidance on how it would respond if it were to fail to do so. The DEIS fails to meet this responsibility.

Reclamation’s next most important responsibility is to lead the states of the Colorado River Basin toward an equitable, consensus-driven management regime for the river. Any viable alternative considered in the DEIS must include at least some degree of mandatory, enforceable reductions

¹⁷ 43 U.S.C. § 1512



or conservation required of the Upper Basin, and must be consistent with the Law of the River. Any acceptable evaluation of alternatives under NEPA must include careful consideration of the social, environmental, and economic impacts of shortage on the cities of Central Arizona and the ramifications to the national economy and our country's security. The DEIS fails to meet this responsibility.

On behalf of the ten municipalities that provide water to over half of Arizona's population, AMWUA appreciates the opportunity to provide input on the DEIS and looks forward to continued engagement with Reclamation throughout this process to promote a sustainable and equitable management regime for all who rely on the Colorado River.

Sincerely,

A handwritten signature in black ink that reads "Warren Tenney". The signature is written in a cursive style with a long, sweeping underline that extends to the right.

Warren Tenney
Executive Director