City of Phoenix
OFFICE OF THE CITY MANAGER

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VIA ELECTRONIC DELIVERY

Genevieve Johnson
Reclamation 2007 Interim Guidelines SEIS Project Manager
Upper Colorado Basin Region
125 South State Street, Suite 8100
Salt Lake City, Utah 84138
CRinterimops@usbr.gov

Re: Comment of the City of Phoenix to the Bureau of Reclamation's "Notice of Intent to Prepare a Supplemental Environmental Impact Statement for December 2007 Record of Decision Entitled Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations For Lake Powell and Lake Mead"

Dear Ms. Johnson:

The City of Phoenix ("Phoenix") appreciates the opportunity to comment on Bureau of Reclamation ("Reclamation") Notice of Intent to Prepare a Supplemental Environmental Impact Statement for December 2007 Record of Decision Entitled "Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations For Lake Powell and Lake Mead," as published in Federal Register Notice 87 FR 69042, November 17, 2022 (hereinafter, the "NOI").

As one of the West's most significant economic and population centers and the fifth largest city in the United States, Phoenix is deeply concerned with the growing water issues on the Colorado River. These concerns include both larger regional concerns related to the welfare of the economy and ecosystems of the Colorado River, and local concerns related to the well-being of our own residents and the ecosystems on which they depend. The Colorado River supports Phoenix businesses that sustain jobs and crucial services, and industries vital to the national economy and security including aerospace, semiconductor manufacturing, pharmaceuticals, and medical device manufacturing, among others. Given the near-term threats to the viability of Lakes Powell and Mead, Phoenix welcomes Reclamation's Notice of Intent and consideration of immediate actions to reallocate storage and reduce near-term demands on the Colorado River.

Phoenix respectfully offers these comments in response to the NOI, focusing on considerations related to the scope of the analysis, potential alternatives, and relevant information and studies.

Scope of Analysis

In the NOI, Reclamation notes that the Department of Interior ("Department") has already taken unprecedented actions to respond to drought and low-runoff conditions, including releasing water from upstream reservoirs to Lake Powell, modifying releases from Glen Canyon Dam, and reducing downstream releases from Lake Mead to users in the Lower Basin. Reclamation also notes that the Department presently lacks analyzed alternatives and further measures that may

be necessary to address drier-than-average conditions and widespread extreme drought. As such, Reclamation has stated that "additional operation alternatives and measures for Lake Powell and Lake Mead are necessary to ensure continued 'operations that are prudent or necessary for safety of dams, public health and safety, other emergency situations.'"[1]

Given current levels of storage and recent hydrologic trends, Reclamation needs to both anticipate and be able to take action to adapt to system conditions that could fall well outside what was contemplated in the 2007 Shortage Guidelines ("2007 Guidelines") or the subsequent Drought Contingency Plan ("DCP"). In Reclamation's recent stakeholder presentations on December 1st and 3rd of this year, modeling showed multiple potential scenarios in which Lake Mead, Lake Powell, or both could approach or reach "dead pool" elevations. In the discussions leading to the 2007 Guidelines and DCP, the scope of scenario analysis provided to Basin stakeholders underestimated the potential for hydrologic scenarios that would reach or exceed the "worst case" presented to stakeholders. In fact, even in 2007, there was growing evidence that aridification caused by climate change was one of the causes of reduced flows in the Basin, in addition to more typical historic drought cycles. As discussed further below, it is important that this underestimation of the impact of climate change not occur again as stakeholders work to develop near-term responses to the continued loss of storage on the Colorado River.

At present, interstate discussions related to addressing both short- and long-term threats to the system appear to be stalled. In part, this is a logical result of a lack of clarity about the likely nature of federal responses and the direction of federal action in the absence of more collaborative solution. As a result, the management approaches that will be proposed by Reclamation in this Supplemental Environmental Impact Statement ("SEIS") will have obvious implications for the development of potential Framework Alternative(s) that might address the immediate, short-term interventions that are needed. Perhaps more importantly, Reclamation's proposed approaches may have significant implications for the development of longer-term alternatives that will be undertaken through the Post-2026 Process.

As such, while recognizing that the scope of the SEIS will necessarily be limited by the scope of the existing 2007 Guidelines, Phoenix recommends that Reclamation undertake a scope of analysis in this SEIS that is as expansive as possible in order to provide meaningful guidance to both Lower and Upper Basin interests as to the nature and extent of immediate and likely future federal emergency responses in both this SEIS and the subsequent Post-2026 Process. While the scope of the current SEIS does not preclude the development of different or more expansive emergency response strategies through the Post-2026 Process, Reclamation should consider that by pursuing the SEIS and the Post-2026 processes in parallel, its first signaled approaches to emergency response (and the scope of users and sectors affected by that response) will inevitably set a precedent and influence the direction of Post-2026 Process conversations.

Similarly, although the scope of the SEIS may be limited primarily to changes in operations at Powell and Mead, actions modifying and reducing releases from Flaming Gorge have already occurred and will have direct bearing on those operations. If conditions continue to worsen, additional operations and measures beyond those at Lake Powell and Lake Mead may be required. Reclamation should consider and anticipate: (1) federal actions involving other core Colorado River infrastructure over the next few years; and (2) the potential that hydrologic conditions might be worse than the historic record in the very short term. How these elements relate to alternatives development and Reclamation's analytical approach are discussed further below.

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[1] 87 FR 69042, 69043.

Framing Potential Alternatives

In the development of and consideration of alternatives, including the proposed federal "Reservoir Operations Modification Alternative," and any "Framework Agreement Alternative(s)" that may ultimately develop out of ongoing stakeholder dialogue, the alternatives considered in the SEIS should address: (1) integration of human health and safety factors; and (2) the need to broaden decision points during low reservoir conditions.

1. Integration of Human Health and Safety Factors

In framing the alternatives that will be considered in the SEIS, Phoenix strongly recommends that Reclamation explicitly define human health and safety priorities; how those priorities are reflected in Colorado River operational decision-making; and provide guidance related to its ability to take those actions within the agency's governing legal authorities and available discretion. In addition, Reclamation must provide additional federal guidance in the form of an overall framework for the sequence and timing of reductions in deliveries based on the stated health and safety priorities. This guidance is necessary to allow municipal and industrial users to plan for reductions, using adaptation strategies within their control to prepare large populations and critical industries for changes in lifestyle and operational conditions.

Critically, the uncertainty the current lack of guidance is creating for municipal and industrial users in the Basin is already causing significant economic consequences that are just as real as those that would result from actual shortages, as uncertainty drives investments and business decisions that may reflect incorrect assessments of the direction of later policies and action. Moreover, the lack of federal guidance on the scope and character of potential emergency responses is also not helping to advance interstate or intra-state stakeholder discussions and is thus hindering cooperative management of the River.

Reclamation need not and should not attempt to use its authority to simply overwrite the extensive legal authorities contained within the Law of the River and its inherent priority system(s)—whether that be the Upper Basin's obligations to meet deliveries to the Lower Basin and its share of deliveries to Mexico under the 1922 Compact, the relative distributions of water among the Lower Basin states under the Boulder Canyon Project Act (BCPA), or the reasonable expectations of parties under federal water delivery contracts. However, it is also critically important that Reclamation acknowledge and recognize its legal authority to consider human health and safety within the basic framework of the Law of the River whenever it is operating the system during emergency conditions.

Specifically, given the scope of its existing legal authorities, Reclamation should expressly consider and recognize its authority to address public health and safety concerns in at least the following areas:

1) Reclamation's clear authority to act to limit particular types of water uses and mandate improved efforts at conservation, particularly during critical conditions;

2) Reclamation's authority to undertake at least limited departures from the Basin's "priority system" where necessary to protect infrastructure, preserve health and safety, and meet fundamental federal objectives such as national security; and

3) Reclamation's clear authority to de-prioritize operational and timing considerations related to hydropower generation in the context of ensuring water deliveries.

Reclamation has multiple available authorities to reduce (or increase) the amount of water available under federal water delivery contracts. These include standard provisions in BPCA water delivery contracts wherein contractors have explicitly acknowledged the potential for circumstances in which full water deliveries cannot be made and absolving Reclamation of liability to ensure water deliveries in those circumstances. See "Subcontract Among the United States, the Central Arizona Water Conservation District, and the City of Phoenix Providing for Water Service," Subcontract No. 07-XX-30-W0507, Section 4.6.

Reclamation similarly has authorities available to it by which it can procedurally require the implementation of conservation measures among both individual water users and particular types or groups of water users who receive Colorado River supplies via federal delivery contracts. Among other potential authorities, the procedures available under 43 C.F.R. § 417.1 et seq. ("Section 417") generally apply to every public or private organization in the Lower Basin that has a valid Colorado River delivery contract pursuant to the Boulder Canyon Project Act or other Reclamation Laws and to federal establishments other than Indian Reservations in the *Arizona v. California* Decree.[2] These regulations provide that, prior to the beginning of the calendar year, the Regional Director is to:

> arrange for and conduct such consultations with each Contractor as the Regional Director may deem appropriate as to the making . . . of annual recommendations relating to water conservation measures and operating practices in the diversion, delivery, distribution and use of Colorado River water, and to the making . . . of annual determinations of each Contractor's estimated water requirements for the ensuing calendar year to the end that deliveries . . . will not exceed those reasonably required for beneficial use under the respective Boulder Canyon Project Act contract or other authorization for use of Colorado River water.[3]

In making these recommendations and determinations the Regional Director is authorized to consider a broad range of factors, including but not necessarily limited to factors such as

> the area to be irrigated, climatic conditions, location, land classifications, the kinds of crops raised, cropping practices, the type of irrigation system in use, the condition of water carriage and distribution facilities, record of water orders, and rejections of ordered water, general operating practices, the operating efficiencies and methods of irrigation of the water users, amount and rate of return flows to the river, municipal water requirements and the pertinent provisions of the Contractor's Boulder Canyon Project Act water delivery contract.[4]

These regulations explicitly allow for Reclamation to reevaluate and modify even previous recommendations and determinations in the event of "changed conditions, emergency, or hardship,"[5] and thus provide a broad potential basis for Reclamation action.[6]

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[2] They do not apply to any person or entity that has a contract under the Warren Act or Miscellaneous Purposes Act. 43 C.F.R. § 417.1. Section 417.5 of the code governs the Commissioner of Indian Affairs' procedure as to the estimated amount of water to be diverted for use on each Indian Reservation.

[3] 43 C.F.R. § 417.2.

[4] § 417.3.

[5] § 417.4. Moreover, the code provides that the "right is reserved to issue regulations of general applicability to the topics dealt with herein." § 417.6.

[6] Given that Reclamation additionally has authority to apportion unused water for consumptive use in other States pursuant to Article II(B)(6) of the *Arizona v. California* Decree, in an emergency situation Reclamation could potentially even exercise these authorities to at least partially rebalance deliveries among the Lower Basin States themselves. In relevant part, the Decree provides: "If, in any one year, water apportioned for consumptive use in a State will not be

Reclamation also has clear existing authority to prioritize river regulation and water delivery for domestic and irrigation uses overpower purposes. Among other relevant authorities, this prioritization is explicitly addressed by the Colorado River Compact,[7] Boulder Canyon Project Act,[8] and *Arizona v. California* Decree.[9] Phoenix fully recognizes that, in most cases, because there are critical needs related to the protection of dam infrastructure, and engineering challenges and uncertainties connected to low reservoir heads, it is desirable and appropriate to maintain minimum buffers of system storage that overlap with the continued operation of hydropower plants and production of hydropower. Phoenix fully supports efforts to rebuild storage in a manner that will take the Colorado River system out of an ongoing crisis management mode – something that would be beneficial to hydropower production. However, in a context where Reclamation will be explicitly curtailing water deliveries to protect critical infrastructure and avoid the potential for even larger shortages, the preservation of hydropower generation above these minimum buffers must be incidental to a strategy that protects higher priority uses of the system; hydropower should not be the basis for driving greater reductions in water deliveries or greater risks to river operations.

Phoenix is also deeply concerned about and acknowledges the ongoing importance of hydropower and its associated revenues within the Basin as a means of funding important programs and meeting other federal obligations, including obligations to federal Indian tribes. Given that these values are already being threatened by reduced generation and will only be further threatened by the future challenges on the Colorado River, Phoenix both supports and calls upon Reclamation and Congress to urgently replace those revenues and address related revenue shortfalls by directing alternative resources to the Upper and Lower Basin Development Funds and the important programs and values that have historically been supported by hydropower revenues.

2. *Broadening Decision Points Under Low Reservoir Conditions*

In modifying and setting operating guidelines, Reclamation should explicitly incorporate and adopt more adaptive and fluid management approaches consistent with the "Robust Decision Making" framework that it is already deploying within the Post-2026 process. These approaches should include the identification and establishment of measurable signposts and triggers that would better enable users to anticipate and implement responses to evolving system conditions.

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consumed in that State, whether for the reason that delivery contracts for the full amount of the State's apportionment are not in effect or that users cannot apply all of such water to beneficial uses, or for any other reason, nothing in this decree shall be construed as prohibiting the Secretary of the Interior from releasing such apportioned but unused water during such year for consumptive use in the other States. No rights to the recurrent use of such water shall accrue by reason of the use thereof." Arizona v. California, 547 U.S. 150, 156 (2006).

[7] Article IV(b) of the 1922 Colorado River Compact states that the impounding and use of water for power shall be "subservient to the use and consumption of such water for agricultural and domestic purposes and shall not interfere with or prevent use for such dominant purposes." Colorado River Compact, art. IV(b).

[8] The Boulder Canyon Project Act provides that the dam and reservoir (Hoover Dam and Lake Mead) are to be used: "First, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses and satisfaction of present perfected rights in pursuance of Article VIII of said Colorado River Compact; and third, for power." Boulder Canyon Project Act, 43 U.S.C. § 617e.

[9] Article II(A) of the 2006 Arizona v. California Consolidated Decree states that the United States, its officers, attorneys, agents, and employees are "severally enjoined: (A) From operating regulatory structures controlled by the United States and from releasing water controlled by the United States other than in accordance with the following order of priority: (1) For river regulation, improvement of navigation, and flood control; (2) For irrigation and domestic uses, including the satisfaction of present perfected rights; and (3) For power." Arizona v. California, 547 U.S. 150, 154 (2006).

Notably, both the 2007 Guidelines and the subsequent DCP extensions of the 2007 Guidelines were focused on the management of reservoirs within a limited range of conditions. For example, the 2007 Guidelines only addressed operations at elevations down to elevation 1025' at Lake Mead and deferred any decisions about what to do beyond that point to future consultation. In general, the rules embraced in the 2007 Guidelines and DCP followed a strategy in which specific volumes of reduction in water use in the Lower Basin, together with the rules for the distribution of water between Mead and Powell, are tied to reservoir elevations at a particular instant in time (as predicted in the August 24-month study, and subject to some limited mid-year adjustments).

To address the potential risks inherent in a system with only minimal amounts of remaining storage, Reclamation must go beyond merely specifying another set of trigger elevations, making related annual operational determinations, and applying corresponding volumetric shortage reductions to Lower Basin users. When reservoir storage is limited, a strategy of annual adjustments tied to instantaneous elevations on January 1 is not adequately responsive, even with the mid-year adjustments that are presently allowed by the rules. In the NOI, Reclamation has stated that it anticipates revising Section 7 of the 2007 Guidelines to allow for additional determinations in a mid-year review. Instead, Reclamation should take a step further toward essentially continuous review and assessment. To this end, Phoenix recommends three key considerations:

1) Any rule set governing the operation of Lakes Mead and Powell should allow for multiple adjustments over the course of each year in response to actual observed changes in condition and/or changes in forecasts. The rule set should include the ability to adjust releases between Mead and Powell but also the ability to adjust relative levels of shortage.

2) Adjustments to the levels of shortage should follow reasonably predictable rules with clear signposts, with adjustments made in a manner that more gradually impacts available water as opposed to making steep additional cuts at arbitrary trigger levels. Water users need advance notice and the opportunity to adjust operations and adapt to the changes in water availability. With a clear set of signposts, triggers, and rules, water users can better prepare for a range of short- and long-term future conditions and develop robust responses. Like many other municipal users, Phoenix can plan for and adapt to changes in Colorado River operations— provided that the potential for those changes is well understood and the expected adjustments have known implementation timelines that are tied to signposts that can be monitored. Like other Central Arizona water users, Phoenix can mobilize and draw incrementally on various replacement supplies if it has adequate notice of the need to do so. The 2007 Guidelines make this planning more difficult by driving less-predictable changes in supply due to the large "steps" in Central Arizona Project ("CAP") shortage levels that are tied to specific reservoir elevations.

3) In making storage management and delivery determinations, Reclamation should consider a combination of both system storage and relevant hydrologic trends. Particularly during low reservoir conditions, the available volumes of reservoir storage throughout the Basin—not just that of Lakes Mead and Powell—become highly relevant to the likelihood and potential timeframe for future system recovery. Similarly, when storage levels in Mead, Powell, and other key reservoirs are low, the storage buffers that are normally present to protect water deliveries, power heads, and avoidance of "dead pool" conditions can potentially be wiped out by a single dry winter. Reclamation should couple whole-system storage and recent hydrologic trends and forecasts in setting

operational rules, such that anticipated dry conditions can lead to proactive reductions in use or adjustments to reservoir operations.

Reclamation has already demonstrated the need for some of these approaches in its recent modeling work, mid-year changes to Powell operations, and other recent actions that have led to the NOI. Thus, for purposes of a "Reservoir Operations Modification Alternative" or other alternatives, Reclamation should use the recommendations and considerations discussed herein to set and revise reservoir management plans and water delivery schedules through the course of each water year. Experience gained from this approach in practice could help to inform future changes to water management in the Post-2026 Process.

Finally, in shaping its proposed responses and actions during low reservoir conditions, Reclamation should establish the foundations for the recovery of the reservoir system over the longer term. Consistent with Phoenix's previous comments in the letter dated September 1, 2022, in response to 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," it is important for Reclamation to move away from a crisis management framework into one that focuses on establishing long-term system resilience. In establishing the rules for operations over the next few years, Reclamation has the opportunity in the SEIS to begin the reservoir recovery process by gaining operating experience with approaches that could work to stabilize available water supplies in the short term and start to rebuild storage for the future.

Conclusion

Phoenix's intent in these comments is not to provide a complete legal or technical treatise, nor to detail how, in the context of the present emergency, Reclamation's authorities might variously be used to protect the viability of critical water infrastructure and the supply of water to homes, families, and nationally-important industries, or to meet its trust responsibilities to federal Indian tribes, protect endangered species and important ecosystems, and satisfy other critical needs throughout the Basin. We are confident that these authorities will be fully debated among the various Basin interests in the coming months.

At the most basic level, however, it is important to recognize that – pursuant to the Supreme Court's decision in *Arizona v. California*[10] – the Secretary of the Interior is functionally the water master for the Lower Basin and thereby bears a significant attendant responsibility for the welfare of the citizens of the Lower Basin. As the Secretary's agent in this water master role, Reclamation stands in a unique position. to fulfill its mission statement "to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public."[11]

The present circumstances faced by the Colorado River Basin are exactly those described by the Court in *Arizona v. California,* as the problems "proved too immense and the solutions too costly for any one State or all the States together."[12] As the Court noted, "[t]he States, despite repeated efforts at a settlement, were unable to agree on how much water each State should get" – thereby placing "the health and growth of the Lower Basin at stake."[13] These circumstances are what ultimately led Congress to pass the Boulder Canyon Project Act and

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[10] Arizona v. California, 373 U.S. 546 (1963).

[11] U.S. Bureau of Reclamation, *About Us – Mission,* (May 3, 2021), https://www.usbr.gov/main/about/mission.html.

[12] Arizona v. California, 373 U.S. 546, 588 (1963).

[13] *Id.*

entrust the Secretary with her present responsibilities[14] while recognizing that "[s]ubjecting the Secretary to the varying, possibly inconsistent, commands of the different state legislatures could frustrate efficient operation of the project and thwart full realization of the benefits Congress intended this national project to bestow."[15]

With interstate negotiations stalled over the current "too immense" and "too costly" problems, all eyes have turned to the federal government and Reclamation to help guide the Basin to a solution. As the designer, owner, and operator of most of the primary storage and much of the delivery infrastructure in the Basin, Reclamation's role includes a fundamental duty to protect human health and safety. Each of the Basin states and the many municipal and utility jurisdictions within them owe similar duties to protect their citizens as part of their inherent police powers, yet their current ability to fulfill those duties is at least partially dependent upon Reclamation fulfilling its duty. Reclamation, as the intermediary and system steward among the Basin states, has assumed an important share of those duties and obligations. It is incumbent on Reclamation to work toward fashioning a solution that will protect the interests of some 40 million people in the United States and Mexico; an economy that represents a substantial fraction of U.S. Gross Domestic Product; and an area that hosts critical national industries, irreplaceable, internationally significant natural resources and ecosystems, important components of our domestic food production system, and other significant values.

Phoenix appreciates Reclamation's consideration of these comments as it works to draft a SEIS to the 2007 Guidelines and looks forward to future discussions and collaboration with Reclamation as this process moves forward.

Sincerely,

Cynthia S. Campbell

Cynthia S. Campbell
Water Resources Management Advisor

[14] *Id.* at 588-91.
[15] *Id.* at 590.