

**Colorado River Basin State Representatives of  
Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming**

January 31, 2023

The Honorable Tanya Trujillo  
Assistant Secretary, Water & Science  
U. S. Department of the Interior  
Washington, DC 20240

The Honorable Camille Calimlim Touton  
Commissioner  
Bureau of Reclamation  
Washington, DC 20240

**Re: Notice of Intent to Prepare a Supplemental Environmental Impact Statement**

Dear Assistant Secretary Trujillo and Commissioner Touton:

Consistent with the Department of the Interior (Interior), Bureau of Reclamation's (Reclamation) November 17, 2022, *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* (Notice), 87 FR 69043 (November 17, 2022), the undersigned Governors' Representatives submit this set of modeling assumptions for an alternative to be evaluated as a potential consensus-based set of actions consistent with the purpose and need set forth in the Notice (Consensus-Based Modeling Alternative or CBMA).

We ask that Reclamation model and evaluate CBMA impacts in the Draft Supplemental Environmental Impact Statement (SEIS) to be issued pursuant to the National Environmental Policy Act of 1969 (NEPA) before identifying a preferred alternative. The CBMA will promote NEPA's goal of fostering more informed decision-making. Therefore, we request that Reclamation advance the CBMA for further evaluation in the NEPA process for comparative purposes. We recognize that impediments may ultimately preclude the CBMA from being incorporated into a consensus-based set of actions to guide the operation of Glen Canyon and Hoover Dams.

Negotiations to implement actions contemplated by this CBMA, both by and between the undersigned and by and between other necessary parties, have not yet been completed, and in many cases have not yet begun. Accordingly, the States and water users expressly reserve their rights under applicable law, including, but not limited to, the Law of the River as broadly defined, and this submittal is not intended to be and shall not be construed in any way as a waiver of any such rights.

EXECUTIVE SUMMARY

The Notice anticipates that alternatives would make specific modifications to Lake Powell and Lake Mead operations governed by the Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead ('07 Guidelines) to prevent Lake Powell and Lake Mead from falling to critically low elevations impacting water delivery or power production from either reservoir in 2023 and 2024. In particular, Reclamation anticipates that alternatives will propose revisions to reduce annual Lake Powell release volumes governed by Sections 6.C. (Mid-Elevation Release Tier) and

6.D. (Lower Elevation Balancing Tier) of the '07 Guidelines to protect Glen Canyon Dam to ensure the deliverability of water downstream and power production. The Notice further anticipates that alternatives would provide for increased Lower Division State (Arizona, California, and Nevada) delivery reductions when Lake Mead is below elevation 1050 ('07 Guidelines Section 2.D.1.b.) or 1025 ('07 Guidelines Section 2.D.1.c.).<sup>1</sup>

As more fully set forth below, the CBMA includes the elements anticipated by Reclamation's Notice. In addition to revising the specific '07 Guidelines provisions referenced in the Notice, the CBMA assesses 1.543 million acre-feet (maf) per year of reductions among all Lower Basin Contractors when Lake Mead is below elevation 1145 for the protection of critical infrastructure (Infrastructure Protection Volumes, hereinafter referred to as IPV). The undersigned believe implementation of the CBMA would protect Glen Canyon Dam infrastructure, water deliveries, and power production, and adequately mitigate the risk that either Lake Powell or Lake Mead reaches dead pool.

#### LAKE POWELL OPERATIONS

Reduced releases at Glen Canyon Dam would be accomplished by modeling operations under Sections 6.C. and 6.D. of the '07 Guidelines as follows:

1. Raise the lower elevation of the Mid-Elevation Release Tier (MERT) from elevation 3525 to elevation 3550 and fix the annual release volume in the MERT at 7.48 maf.
2. Raise the upper elevation of the Lower Elevation Balancing Tier (LEBT) from elevation 3525 to elevation 3550 and fix the annual release at 7.0 maf without balancing releases.
3. Reduce releases as necessary to protect elevation 3500.

#### LAKE MEAD OPERATIONS

Reduced deliveries from Lake Powell must be coupled with reduced deliveries from Lake Mead or Lake Mead's existing storage will be quickly depleted. The CBMA incorporates the following modeling adjustments to the '07 Guidelines and to elevation-dependent Drought Contingency Plan (DCP) contributions required under the Lower Basin Drought Contingency Plan Agreement Dated May 20, 2019, and the incorporated LBOs, to reduce Lake Mead outflows:

1. When Lake Mead is below 1145, Infrastructure Protection Volumes (IPV) consisting of evaporation and system losses in the amount of 1.543 maf are apportioned among all Contractors (as such term is defined in Section XI.F.9. of the '07 Guidelines) in accordance with the methodology outlined in Attachment 1, hereto.
2. Section 2.D.1.a. – no changes.
3. Section 2.D.1.b. – no longer applicable (see 4. below).

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<sup>1</sup>References to reservoir elevations throughout this correspondence are to January 1 most probable elevations as predicted by the preceding August 24-month study.

4. Section 2.D.1.c. – This provision, involving “Tier 3” shortages below elevation 1025, is moved up to elevation 1050 (i.e., elevation 1025 is replaced with elevation 1050), such that Arizona is apportioned 2.32 maf at elevation 1050 and below, and Nevada is apportioned 280,000 at elevation 1050 and below.
5. Arizona, California, Nevada, and Mexico would make DCP contributions in the amounts set forth in Table 1 of the LBOs as if Lake Mead is at or below elevation 1025 when the actual elevation of Lake Mead is at or below 1050. This would require for years when Lake Mead’s elevation is below 1050 feet DCP Contributions from Arizona in the amount of 240,000 acre-feet, from California in the amount of 350,000 acre-feet, and from Nevada in the amount of 10,000 acre-feet. To maintain parity and alignment of operations during those same years, Mexico would contribute 150,000 acre-feet towards Mexican Water Reserve (under the Binational Water Scarcity Plan of Minute 323).
6. In addition to the above, reductions at elevation 1030 and below and elevation 1020 and below are also part of this CBMA as follows:
  - a. At elevation 1030, a 250,000 acre-feet apportionment reduction in addition to all reductions at higher elevations that shall be apportioned 93,000 acre-feet to Arizona, 10,000 acre-feet to Nevada, and 147,000 acre-feet to California.
  - b. At elevation 1020, a 200,000 acre-feet apportionment reduction in addition to all reductions at higher elevations that shall be apportioned 75,000 acre-feet to Arizona, 8,000 acre-feet to Nevada, and 117,000 to California.
  - c. Additional reductions as necessary to protect elevation 1000.

Lake Powell and Lake Mead cannot be further diminished without unacceptable risk to the Colorado River System. Accordingly, to satisfy the Notice’s purpose and need, any preferred alternative must be sufficiently certain that system storage is maintained without reliance upon remote or speculative actions by third parties.

#### PARALLEL ACTIVITIES

The undersigned recognize that modifying the ’07 Guidelines is an important piece of the puzzle that might be formulated to protect and maintain the Colorado River’s ability to support 40,000,000 people in the Basin. However, other methods that help secure the water supply of the Basin have been proposed by Reclamation and others. These additional actions should be pursued with alacrity and in parallel with the operational changes contemplated by the SEIS.

One such action is beneficial use definitions and determinations under 43 C.F.R. Part 417 (Procedural Methods for Implementing Colorado River Water Conservation Measures with Lower Basin Contractors and Others). Each industrial, municipal, and agricultural user should be held to the highest industry standards in handling, using, and disposing of water; there is precious little water left to waste.

The Lower Colorado River Multi-Species Conservation Program provides Endangered Species Act compliance for operations of the Lower Colorado River, including water deliveries and hydropower. The actions contemplated in the preferred alternative will likely necessitate expanded compliance for lower Lake Mead elevations and reduced deliveries to all water users, including reductions to only those delivery volumes necessary to protect elevation 1,000 in Lake Mead. It is imperative this compliance moves swiftly and in parallel with this SEIS.

In addition to limiting releases from Glen Canyon Dam when Lake Powell drops below elevation 3550, measures to increase flows into Lake Powell may be needed to help protect water delivery infrastructure and hydropower operations. Accordingly, at appropriate elevations in the modified LEBT, there are parallel complementary actions that are not within the scope of this federal action. However, a reasonable range of their impacts, as further described below, should inform the modeling effort. Those actions include operations pursuant to the Drought Response Operations Agreement (DROA) and additional Upper Division State (UDS) considerations.

DROA planning and operations, including recovery, are conducted consistently with the DROA and existing authorities.<sup>2</sup> The CBMA includes assumptions regarding DROA releases from zero to 500,000 acre-feet per DROA Year (May 1 – April 30), which will conform to the DROA and its implementing documents and will be made only to help protect Lake Powell elevation 3500 feet.

Additional UDS considerations:

1. Hydrologic shortages are involuntary reductions in consumptive water use due to the lack of physical and legal availability of water. Hydrologic shortages occur to varying degrees annually and on a regular basis. Though hydrologic shortage quantification is complex and unique to each sub-basin each year, it should be estimated to inform this SEIS process using the best available science.
2. Voluntary contributions are voluntary reductions of consumptive use approved by the UDS to help protect elevations in Lake Powell for the duration of this SEIS. Voluntary contributions are generated from programs that result in reductions in consumptive use, such as the System Conservation Pilot Program, an Upper Basin Demand Management Program (if established), or similar actions. Voluntary contribution volumes will likely vary widely based on hydrologic conditions.

Finally, the SEIS should include modeling for the reconciliation of the 480,000 acre-feet withheld by the Secretary in Lake Powell in 2022, without making a final determination.

#### INCLUSION OF MEXICO

Mexico has been a progressive and dependable partner to the United States and Colorado River water users within the United States even as the worsening supply/demand imbalance has depleted storage within the system. In 2017's Minute 323 to the "United States-Mexico Treaty on Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande" signed February 3, 1944 ("1944 Water Treaty") for example, the United States and Mexico agreed on the "importance of aligning operations for

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<sup>2</sup> 2019 Colorado River Drought Contingency Plan Authorization Act (Pub. L. 116-14).

both countries” and the need for their respective “governments and stakeholders to seek mechanisms to avoid reaching critically low reservoir elevations.” Glen Canyon dam’s infrastructure is currently threatened by significantly reduced inflows over the past two decades, in turn threatening to make deliveries to users in the Lower Basin difficult or impossible. We recognize that the Record of Decision will not determine actions regarding Mexico, and any participation shall be coordinated through the U.S. Section of the International Boundary and Water Commission. However, it is critical to consider the potential impacts of a range of actions including Mexico’s participation.

Accordingly, this CBMA and Attachment 1 hereto contemplate continued alignment of operations for users in both countries. Specifically, for modeling purposes, Mexico is allocated approximately 356,000 acre-feet of IPV reductions when Lake Mead’s elevation is below 1145, Mexico’s shortage volume and Mexico’s Water Reserve savings under Minute 323 is moved to Tier 3 along with the U.S. Contractors any time Lake Mead’s elevation is below 1050.

#### TERM

The Notice anticipates operational changes in 2024 but indicates that a selected alternative may “inform potential operations in the 2025 and 2026 operating years.” To protect the system through the expiration of the ’07 Guidelines, the undersigned suggest that any preferred alternative be sufficiently robust, even under very dry hydrology, to maintain Lake Powell at elevation 3500 and Lake Mead at elevation 1000 through at least 2026 or the establishment of new guidelines. The NEPA evaluation should similarly be robust enough to avoid a further supplementation process for years 2025 and 2026.

#### RESERVATION OF RIGHTS

By providing this CBMA, we do not waive any rights, including any claims or defenses, we may have or that may accrue under any existing federal or state law or administrative rule, regulation, or guidelines, including without limitation the Colorado River Compact of 1922, the Boulder Canyon Project Act, the Mexican Water Treaty of 1944, the Upper Colorado River Basin Compact of 1948, the Consolidated Decree of the U.S. Supreme Court in *Arizona v. California*, the Colorado River Storage Project Act of 1956, the Colorado River Basin Project Act of 1968, and any other applicable provision of federal law, rule, regulation, or guideline, including the Administrative Procedure Act. Any failure by the undersigned to address specific aspects of the SEIS, shall not be construed as an endorsement or an admission with respect to any factual or legal issue for the purposes of any future legal, administrative, or other proceeding. Moreover, we reserve the right to provide further comments and engage with Reclamation as it proceeds with subsequent phases of the SEIS process.

#### CONCLUSION

We appreciate the opportunity to provide this Consensus Based Modeling Alternative for Reclamation’s review within its SEIS process. While Reclamation is preparing the draft SEIS, we commit to continue to work with Reclamation on the CBMA and any additional development and refinement.

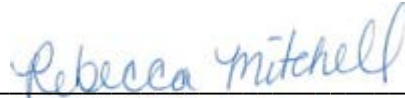
We recognize that over the past twenty-plus years there is simply far less water flowing into the Colorado River system than the amount that leaves it, and that we have effectively run out of storage to deplete. Accordingly, we will continue to work together and with the federal government, water users,

Basin Tribes, non-governmental organizations, and other Colorado River stakeholders to reach consensus on how best to share the burden of protecting the system from which we all derive so many benefits.

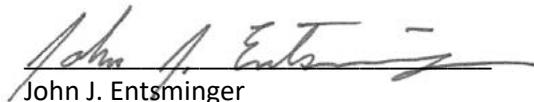
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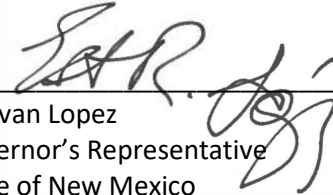
Thomas Buschatzke  
Governor's Representative  
State of Arizona



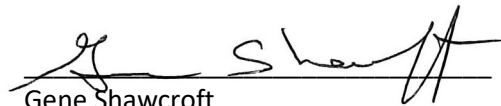
Rebecca Mitchell  
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Estevan Lopez  
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Gene Shawcroft  
Governor's Representative  
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Brandon Gebhart  
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State of Wyoming

cc: David M. Palumbo, Deputy Commissioner – Operations, Bureau of Reclamation  
Reclamation 2007 Interim Guidelines SEIS Project Manager, Upper Colorado River Basin Region  
Via email: [CRinterimops@usbr.gov](mailto:CRinterimops@usbr.gov)

Attachments

## Attachment 1 - Distribution of Infrastructure Protection Volumes

The modelling assumptions for the Consensus Based Modelling Alternative (CBMA) should allocate Infrastructure Protection Volumes (IPV) and additional reductions among Contractors in the Lower Basin and Mexico using the following method. Please consult with Arizona and Nevada's technical representatives for details or questions.

1. A Contractor's recent Historical Baseline Consumptive Use (Historical Baseline), representative of non-shortage conditions, will be determined in the following manner:
  - a) Compute baseline consumptive use for each Contractor as its 3-year average consumptive use for the 2019-2021 period.
  - b) Any approved (intrastate forbearance) conservation activities, including ICS creation, and system conservation should be added to consumptive uses for each year.
2. Once Lake Mead operating conditions and associated reductions are determined in accordance with the 2007 Interim Guidelines and DCP, Historical Baseline shall be modified to reflect shortage and DCP conditions on the Central Arizona Project, Southern Nevada Water Authority and the Metropolitan Water District of Southern California (CAP/SNWA/MWD) consumptive use. Using the shortage schedules, compute the total shortage assigned to each State as the sum of the 2007 Interim Guidelines and DCP. Compute the adjusted CAP/SNWA/MWD entitlement by subtracting the total state shortage from their respective entitlement. DCP contributions being satisfied with stored ICS shall not be included in this calculation.
3. Historical Baseline shall be modified based upon the water available for consumptive use in the upcoming year (Modified Historical Baseline). *For example, if Nevada is taking 20,000 acre-feet (af) of shortage reductions and 10,000 af of DCP contributions, the historical baseline shall be adjusted such that Nevada is not being assessed an IPV charge for more water than is available to Nevada in the coming year (270,000 af).* If the Historical Baseline is less than the Modified Historical Baseline, carry the Historical Baseline forward.
4. Below elevation 1145' System losses will be assessed as follows:
  - Reach 1 Lee's Ferry to Hoover Dam (580,000 af)
  - Reach 2 Hoover Dam to Davis Dam (193,000 af)
  - Reach 3 Davis Dam to Parker Dam (329,000 af)
  - Reach 4 Parker Dam to Imperial Dam (365,000 af), and
  - Reach 5 Imperial Dam to the NIB (76,000 af)
5. For each reach, the Contractors that rely on the reach to store and/or transmit water deliveries would share proportionally in the system loss for the reach based on their fraction of the total water deliveries within the reach as modified for the upcoming year.
6. The system loss reduction shall be applied to the anticipated consumptive use for the year in which reductions will be applied. Anticipated consumptive use shall be based on the Modified Historical Baseline.

7. Between elevations 1030' and 1020' additional reductions will be assessed pro rata to Contractors' remaining allocations in each State as follows:  
Arizona (93,000 af), Nevada (10,000 af), and California (147,000 af)
  
8. Below elevation 1020' additional reductions will be assessed pro rata to Contractors' remaining allocations in each State as follows:  
Arizona (168,000 af), Nevada (18,000 af), and California (264,000 af)

A table of the anticipated Lower Basin and state level reductions is included below. Because past consumptive use, ICS, shortage, and DCP obligations all impact the IPV, these are estimates that should be updated and refined with the help of Reclamation staff.

<b>Lower Basin Totals (all reductions in 1000 acre-feet)</b>						
<b>Tier</b>	<b>Elevation</b>	<b>IG</b>	<b>DCP</b>	<b>IPV</b>	<b>Add'l Reductions</b>	<b>Total</b>
Tier 0	1090-1075	0	241	1,543	0	1,784
Tier 1	1075-1050	383	230	1,543	0	2,156
Tier 2a	1050-1045	625	750	1,543	0	2,918
Tier 2b	1045-1040	625	750	1,543	0	2,918
Tier 2c	1040-1035	625	750	1,543	0	2,918
Tier 2d	1035-1030	625	750	1,543	0	2,918
Tier 2e	1030-1025	625	750	1,543	250	3,168
Tier 3a	1025-1020	625	750	1,543	250	3,168
Tier 3b	1020-1015	625	750	1,543	450	3,368
Tier 3c	1015-1000	625	750	1,543	450	3,368



Tier	Elevation	Arizona					Nevada					California					Mexico				
		IG	DCP	IPV	Add'l Reductions	Total	IG	DCP	IPV	Add'l Reductions	Total	IG	DCP	IPV	Add'l Reductions	Total	IG	DCP	IPV	Add'l Reductions	Total
Tier 0	1090-1075	0	192	408	0	600	0	8	17	0	25	0	0	766	0	766	0	41	351	0	392
Tier 1	1075-1050	320	192	387	0	899	13	8	18	0	39	0	0	782	0	782	50	30	356	0	436
Tier 2a	1050-1045	480	240	374	0	1,094	20	10	19	0	49	0	350	816	0	1,166	125	150	335	0	610
Tier 2b	1045-1040	480	240	374	0	1,094	20	10	19	0	49	0	350	816	0	1,166	125	150	335	0	610
Tier 2c	1040-1035	480	240	374	0	1,094	20	10	19	0	49	0	350	816	0	1,166	125	150	335	0	610
Tier 2d	1035-1030	480	240	374	0	1,094	20	10	19	0	49	0	350	816	0	1,166	125	150	335	0	610
Tier 2e	1030-1025	480	240	369	93	1,182	20	10	19	10	59	0	350	813	147	1,309	125	150	343	0	618
Tier 3a	1025-1020	480	240	369	93	1,182	20	10	19	10	59	0	350	813	147	1,309	125	150	343	0	618
Tier 3b	1020-1015	480	240	364	168	1,252	20	10	19	18	67	0	350	810	264	1,424	125	150	350	0	625
Tier 3c	1015-1000	480	240	364	168	1,252	20	10	19	18	67	0	350	810	264	1,424	125	150	350	0	625

\* All values are in 1000 acre-ft