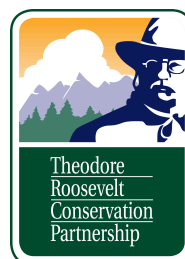




# Cooperative Conservation NEPA Alternative

*Post-2026 Colorado River Operations and Strategies*



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**Cover Photo 1.** (Top) Aerial view of Reflection Canyon, Glen Canyon, Lake Powell, Arizona. Credit: Justin Reznick

**Cover Photo 2.** (Bottom) Lake Mead at critically low elevations with “bathtub” rings. Credit: Colleen Miniuk-Sperry

## A. Introduction

On behalf of our respective organizations, the undersigned conservation groups (Conservation Groups or Groups) submit the Cooperative Conservation Alternative (Cooperative Conservation) to contribute to the ongoing dialogue shaping the future of the Colorado River through the post-2026 NEPA process for developing Colorado River Guidelines and Strategies.

The Groups request the Bureau of Reclamation include Cooperative Conservation in its analysis of post-2026 Colorado River Guideline Operations and Strategies as a forward-looking, comprehensive approach for addressing the pressing and evolving challenges facing the Colorado River Basin, its ecosystems, and the diverse community of sovereigns and stakeholders who rely upon its resources.

Cooperative Conservation is designed to inform and enhance one or more alternatives for consideration in developing the post-2026 Colorado River Operations and Strategies Environmental Impact Statement (EIS). It emerges from a synthesis of lessons learned, a deep understanding of the Basin's environmental dynamics, and a commitment to collaborative, equitable water management, and endeavors to introduce innovative strategies that balance the needs of human and natural systems under the shadow of climate change and increasing water scarcity.

The urgency to redefine the framework for Colorado River operations cannot be overstated. The Bureau of Reclamation's (Reclamation) notice of intent to prepare an EIS for the post-2026 Colorado River marks a critical step toward addressing the Basin's future needs ("Notice of Intent To Prepare an Environmental Impact Statement for Post-2026 Colorado River Operational Guidelines and Strategies for Lake Powell and Lake Mead," 88 Fed. Reg. 12345 (June 16, 2023)). The existing guidelines, while pioneering at the time of their inception, are now recognized as insufficient to navigate the complexities of prolonged drought, escalating impacts of climate change, and pressing needs of a diverse array of sovereigns and stakeholders. Cooperative Conservation is rooted in the recognition that the Colorado River Basin has entered an era of uncertainty, where traditional management approaches must be reevaluated in light of scientific advancements, changing hydrological patterns, and the imperative of sustainability.

The significance of this Alternative lies not only in its aim to expand consideration of ways to address the immediate challenges, but also in its vision for a resilient and adaptive future that honors the interdependence of all who share this vital river. By embracing a holistic perspective that integrates scientific insight, stakeholder inclusivity, and environmental stewardship, our alternative is a framework for optimizing every drop of the Colorado River to better ensure it can remain a life-sustaining resource for future generations.

As the Conservation Groups submit this Alternative, we are mindful of the collective effort required to steward the Colorado River through the challenges ahead. We look forward to engaging in a constructive dialogue with Reclamation, the Basin States and Tribes, and all interested stakeholders involved in this essential process, united by our shared commitment to the River that sustains us all.

## B. Background/Context

The binational Colorado River Basin confronts an unparalleled challenge: reconciling the water demands of over 35 million people and millions of acres of agricultural land with the ecological needs of the natural river system under siege by climate change and over-allocation. Reclamation's acknowledgment of the need to prepare an EIS for post-2026 operations and strategies sets the stage for a comprehensive evaluation of the river's future management. A confluence of factors necessitates this consideration, including:

- **Crisis of Hydrological Imbalance:** The Basin is experiencing a dire mismatch between the growing water demands of agricultural, urban, and ecological needs and the decreasing supplies due to over-allocation and reduced inflows. This imbalance has put the Basin in a state of decreasing reservoir levels, emergency operations, environmental damage, and less reliability in water supply from year to year, compelling a reevaluation of water management strategies to ensure sustainability.
- **Reliance on Depleting Storage:** Historically, the Colorado River Basin has relied on its vast storage capacity, epitomized by reservoirs such as Lake Powell and Lake Mead, to buffer against variability in annual water supply. Despite implementation of the 2007 Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead (2007 Guidelines) and 2019 Drought Contingency Plans (DCPs), these storage reserves have been depleted to critically low levels, signaling the unsustainability of current operational paradigms.
- **Climate Change Impacts:** The experience of the past two decades, augmented by scientific studies, projects a likelihood of a hotter and drier climate for the Colorado River Basin. This emerging reality is characterized by a long-term decline in hydrology, compounded by highly variable and uncertain precipitation patterns from year to year. The evolving climate scenario necessitates a proactive and adaptive operational approach that anticipates rather than reacts to future challenges.
- **Integrated Basin Management:** The complexities of the Colorado River Basin's hydrology and the interdependencies of its water users (including the environment) demand a holistic management perspective. Lessons learned from the implementation of the 2007 Guidelines and DCPs highlight the need for a basin-wide approach that transcends political and geographical boundaries to foster resilience and sustainability.

Our pre-scoping comment letter underscores these challenges, emphasizing the urgent need for new operational strategies that reflect a realistic appraisal of the river's hydrology, the imperative of system-wide management, and the protection of critical environmental resources (Joint Pre-Scoping Comments Letter for Post-2026 Colorado River Operations, June 24, 2023).

Amidst these challenges, there are emerging positive factors that also lay a foundation for the innovative strategies proposed through Cooperative Conservation, including but not limited to:

- **Increasing Recognition of the Need to Adapt:** There is a growing consensus among sovereigns and stakeholders, including federal, state, tribal, and local entities, on the urgent need for flexible and adaptable management strategies that can accommodate the dynamic nature of climate variability and water demand pressures.
- **Advances in Water Conservation Policy/Technology and Forecasting:** Policy and technological advancements in water conservation and efficiency, along with

improved hydrologic and climate forecasting models, are enhancing our ability to use water more judiciously and to plan for variability and change with greater precision.

- **Increased Understanding of the Relationship Between Watershed Health and River Flows:** Recent research underscores the critical link between watershed health and resilience of river flows. This knowledge supports integrated water management practices that benefit both human and ecological communities.
- **Federal Recognition of the Need for Additional Funding:** The federal government has acknowledged the necessity for increased investment in water infrastructure, conservation, and river health initiatives that support the long-term resilience of the system as a whole. This recognition is paving the way for greater financial support for sustainable water management efforts across the Colorado River Basin.<sup>1</sup>

These positive factors contribute to a promising context for our proposed solutions, suggesting that, despite significant challenges ahead, there are reasons to be optimistic about our collective capacity to forge a sustainable path forward for the Colorado River Basin.

## C. Cooperative Conservation

Cooperative Conservation is an operating alternative that synthesizes lessons learned from past management experiences and current scientific understandings. Most alternatives proposed for the post-2026 Colorado River NEPA process center on potential changes in reservoir releases and water uses based on different legal and negotiating positions held by the Upper and Lower Division States. Our proposal broadens these alternatives to consider additional proactive responses, targeted reservoir management strategies, and innovative and flexible tools in the face of uncertain and changing future water supply conditions. Specifically, Cooperative Conservation emphasizes approaches (summarized below) to help:

- Stabilize system storage and avoid crisis management;
- Target reservoir management to integrate stewardship and mitigation in storage and release operations;
- Maintain opportunities for Colorado River Delta flows; and
- Incentivize flexible tools and water management.

### 1. Stabilize Storage and Avoid Crisis Management - Dual Indicator Operations

Cooperative Conservation proposes “**Dual Indicator Operations**” for determining annual releases from Lakes Powell and Mead to better stabilize storage and avoid crisis to crisis management. This approach predicates annual reservoir operations at Lakes Powell and Mead first on combined storage at relevant system reservoirs and second on climate trends affecting Basin water supplies.

**Rationale:** *The 2007 Guidelines inform operation of Lakes Powell and Mead to withstand a normal drought cycle. They are based on an overly optimistic estimate of future hydrology, limited forecasts/modeling that do not account for climate trends, and a primary goal of limiting shortages and avoiding curtailment of water users. This has resulted in reduced reservoir releases only after significant storage declines when reservoirs risk reaching critically low levels. This has led to effectively "mining" storage and increasing risks of catastrophic shortages by allowing reservoirs to*

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<sup>1</sup> See e.g., Colorado River Resilience at <https://resilientcoriver.org/>

*dangerously approach the point where they cannot reliably release water. The Dual Indicator Operations advance operations that provide a proactive yet relatively predictable strategy to setting annual water release determinations to avoid crisis management and stabilize storage to reduce the threat to Colorado River Basin ecosystems and allow water users to assess the amount of water likely to be available with a greater degree of confidence over the life of the new guidelines.*

### **i. Indicator 1 - Combined Storage**

Although Lakes Powell and Mead are the powerhouse reservoirs driving the Colorado River system, their operations can still be influenced by conditions and operations at other system reservoirs (Flaming Gorge, Blue Mesa, Navajo Reservoirs, Lake Mohave and Lake Havasu). For the first reservoir release indicator (combined storage), Cooperative Conservation proposes introducing continuous rule curves for baseline releases from Lake Powell based on the available live storage at Lake Powell, Flaming Gorge, Blue Mesa, Navajo Reservoir (Colorado River Storage Project (CRSP) Initial Unit storage) and for deliveries from Lake Mead based on available live storage from Lake Mead, Lake Mohave and Lake Havasu in addition to the CRSP Initial Units (whole system storage). The Lake Powell curve would be based on available CRSP Initial Unit storage in recognition of the upstream facilities' potential influence on Lake Powell, while acknowledging the need to delink the influence of Lower Basin conditions on Upper Basin actions/operations.<sup>2</sup> Similarly, the Lake Mead rule curve would be based on available whole system storage in recognition that such storage will inform current and future water availability for downstream water users.

Assessing the health of the Colorado River's relevant system storage to inform operations at Lakes Powell and Mead allows the Colorado River community to move away from unreliable forecasting and reservoir elevation triggers that have challenged relationships and operations. It also avoids concern over where water is stored in the system or the appearance of "hiding" storage outside of Lakes Powell and Mead that leads to conflict and debates. It further removes incentives for acting just enough to hover slightly above or below the specific reservoir elevation triggers, and opens the door for the possibility of greater flexibility and adaptability in reservoir management (see Flexible and Innovative Tools - Conservation Reserve, Section C.4).

### **ii. Indicator 2 - Climate Response**

Storage by itself, however, is not enough to prepare the Colorado River community for the water supply challenges that may come as a result of climate trends in the Basin. Adding a near-term climate response trend introduces a much needed proactive measure to anticipate the impacts of known conditions on future system storage.

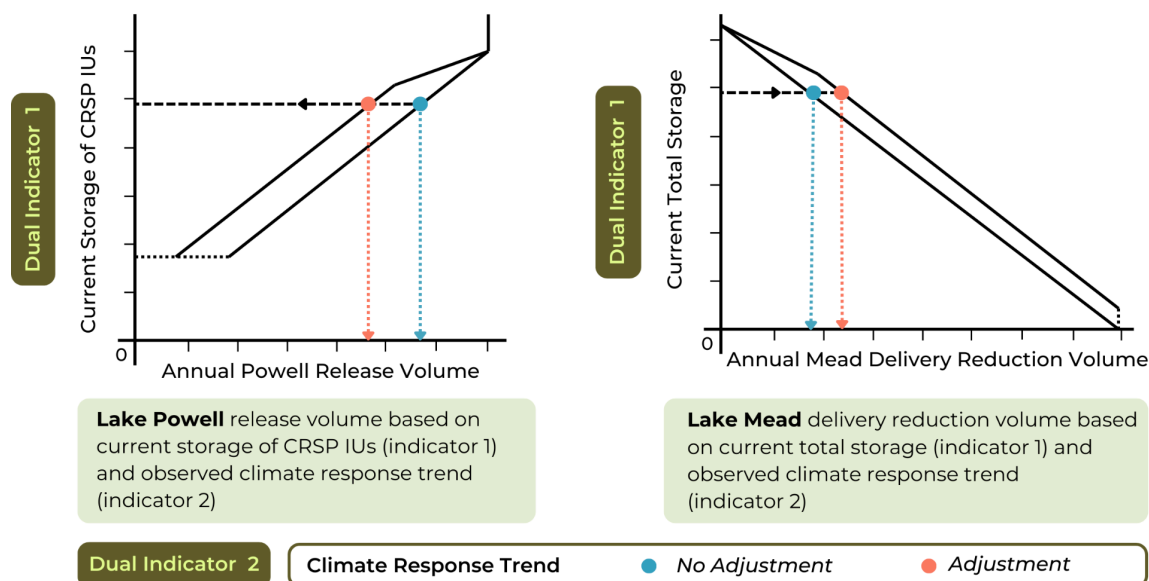
Cooperative Conservation proposes applying near-term, observed trends over the baseline storage/release curves for the second release determination indicator. This "Climate

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<sup>2</sup> By proposing Powell and Mead operations to consider relevant system storage conditions, the Dual Indicator Operations do NOT aim to make storage above Powell or below Mead readily available for release outside the normal course of operations under existing Records of Decisions and Biological Opinions for those respective facilities. Nonetheless, such storage is still an important indicator of system health to inform what to expect from operations at Powell and Mead both in the current year and in years to come. For example, if hydrology has been so impacted by climate change during the course of the post-2026 Guidelines that CRSP Initial Units do not fill to normal/typical volumes in a given year, that would inform expectations of how much water would be released to Powell through the normal course of operations which in turn would inform expectations of subsequent conditions at Powell and Mead, respectively.

Response” indicator would be used to anticipate any potential loss in net storage of CRSP Initial Units (for Lake Powell) and whole system storage (for Lake Mead) based on recent hydrology trends in the Basin. It would help the Basin adjust to expected conditions (i.e., lower runoff because of dry soils that results in less storage in the upcoming year) by avoiding making larger releases than the system can support. This Climate Response indicator is not a forecast, and should be distinguished from predictions of seasonal precipitation and flow that have been used to inform current reservoir operations and have led to less confidence in the functionality of operational triggers.

For the post-2026 NEPA process, Cooperative Conservation applies the 3-year hydrologic adjustment that is embedded in Reclamation’s Colorado River Basin Post-2026 Operations Exploration Webtool, which factors temperature, precipitation, snow, etc. into the natural flow calculation at Lee Ferry. We recognize, however, that any trends used to inform annual reservoir operations must be reliable and would ideally be agreed to by consensus. We are interested in discussing with Reclamation, the Basin States and Tribes as well as the rest of the Colorado River community the appropriate trends to rely on, including the possibility of recent temperature-related indicators that have a demonstrated correlation to water supply availability.<sup>3</sup> Other trends to possibly consider may relate to other drivers of positive or negative change, such as shifts in recent hydrology or uses, soil moisture trends, dust on snow, groundwater storage levels and trends, or evolving patterns of regional precipitation. Modeling assumptions for the Dual Indicator Operations are outlined as reservoir regimes in Section D below.



**Figure 1.** Dual Indicator Operations - conceptual illustration. In Dual Indicators Operations, annual release volumes are based on Colorado River Storage Project Units (CRSP) and a climate response trend and annual delivery reduction volumes are based on CRSP units plus Lakes Mead, Mojave and

<sup>3</sup> Recent investigations of the “hot drought” phenomenon have shown that higher temperatures do correlate closely with the reduced runoff efficiency that has been observed in the Basin due to higher EvapoTranspiration values changes in vegetation, and longer growing seasons (e.g. estimated by one study as ~9.5% at present, potentially increasing to ~20% by 2050). Udall, B., & Overpeck, J. (2017). The twenty-first century Colorado River hot drought and implications for the future. *Water Resources Research*, 53(3), 2404-2418. <https://doi.org/10.1002/2016WR019638>.

Havasu (Total System Storage) and a climate response trend. The black lines show the relationship between storage, release volume, and adjustments based on indicators.

## 2. Targeted Management of Operations to Include Stewardship and Mitigation

Cooperative Conservation proposes targeting reservoir management to take a multi-benefit approach by incorporating stewardship and mitigation principles into reservoir operations that help maintain the integrity of the Colorado River Basin's ecosystems.

**Rationale:** Climate change and reservoir management decisions are indisputably impacting natural resources and systems throughout the Basin. Yet, environmental considerations have oftentimes had to be separated from Colorado River decision making from year to year. For example:

- **Recovery Programs in the Upper Colorado River, San Juan River Basin, and on the Virgin River** that provide for ongoing water uses in conjunction with recovery of threatened and endangered species under the Endangered Species Act are separated by independent records of decisions or biological opinions, which in some cases, have not been updated to reflect current Basin conditions.
- Management of the **Grand Canyon and its resources** frequently fall under the framework of the Grand Canyon Protection Act, which does not account for flow effects based on annual operational considerations at Glen Canyon Dam.
- The **Lower Colorado River Multi-Species Conservation Program (LCR MSCP)** has been successful in achieving restoration goals identified as of 2006. Conditions over the past 20 years reveal a need for similar actions in response to changing conditions or the potential need for increased reductions in deliveries from Lake Mead along the Lower Colorado River corridor in years to come.
- The environmental and health effects of the **Salton Sea's** declining inflow are directly connected to delivery reductions in the Lower Basin but sometimes considered beyond the geographic scope of annual reservoir operations.
- **Impacts from climate change** are being felt in the Basin but are not yet fully incorporated into some federal reservoir operations as they work to implement the Law of the River.
- Effects of annual operations at Lake Mead on flows to the **Cienega de Santa Clara** and **Colorado River Delta** are sometimes determined to be beyond the purview of NEPA for reservoir operations.

As a result, the historic processes to establish rules governing annual operation of the two largest Colorado River reservoirs have not always been able to fully contemplate storage and release measures that could help forestall the degradation of the Basin's natural systems. Cooperative Conservation proposes to rectify this outcome in part by targeting reservoir management, where possible and consistent with the Law of the River, to integrate stewardship and mitigation considerations into the annual operations at Lakes Powell and Mead under the post-2026 Guidelines.



### ***i. Stewardship Target<sup>4</sup> - Grand Canyon Example***

Nowhere in the Colorado River Basin is the need for environmental stewardship better exemplified than the Grand Canyon. As the natural conduit between Lakes Powell and Mead along the Colorado River mainstem, the health of the Grand Canyon ecosystem is tied to management decisions for coordinating operations between the two reservoirs. At the same time, the Grand Canyon National Park is an essential Colorado River resource that supports biologically diverse communities, including many rare, endangered, and endemic species as well as several ecosystems, ranging from the lower canyon's Sonoran Desert to the North Rim's coniferous forest. The park also contains important cultural resources, and more than ten Tribes ascribe substantial cultural significance to the Grand Canyon, the Colorado River, and various sites and resources through the park's boundaries. Not to be overlooked, the Grand Canyon also provides opportunities for a range of recreational experiences that attract millions of visitors annually as one of the crown jewels of the National Park system and one of the seven natural wonders of the world.

The post-2026 Guidelines provide both a need and opportunity to consider Grand Canyon flow needs as part of the rules for Lake Powell's annual storage and release operations.<sup>5</sup> Specifically, annual storage considerations at Lake Powell that influence water temperature, invasive species, high flow experiments, and minimum flow priorities can help create the conditions for Powell releases to ensure ongoing compliance with the Endangered Species Act and continued operation of the Long-Term Experimental Management Plan (even if adjusted at a later date) under the Grand Canyon Protection Act, and the sustainability of Grand Canyon's resources through changes in climate and annual reservoir operations during the life of the post-2026 Guidelines.

In light of these resource considerations, which are further summarized in Table 1, Cooperative Conservation identifies Grand Canyon flow targets to inform the rule curve for annual storage and release of water at Lake Powell. These targets inform when would be beneficial to increase or decrease releases from Powell but do NOT serve as hard floors or ceilings to protect Powell storage (See Section D). Moreover, Cooperative Conservation recognizes that such storage targets may have implications for water supply, hydropower production and other resources which will be important to analyze and assess to determine viable tradeoffs and mitigation responses as part of Reclamation's NEPA process.

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<sup>4</sup> Stewardship refers to responsible use of natural systems through conservation and sustainable practices. Chapin, F. S., Stephen R. Carpenter, Gary P. Kofinas, et al. 2010. Ecosystem Stewardship: Sustainability Strategies for a Rapidly Changing Planet." *Trends in Ecology & Evolution*. 25 (4):241-249.

<sup>5</sup> Currently, hourly, daily, and monthly operational decisions at Glen Canyon Dam fit squarely within the management framework set forth in the Grand Canyon Protection Act, but annual operations do not. Because annual operations still have the potential to impact Grand Canyon resources, the post-2026 Guidelines present the chance to consider impacts to Grand Canyon resources through the full cycle of reservoir operations (Annual ops - post-2026 Guidelines and hourly, daily, monthly ops - GCPA authorities). See Grand Canyon Protection Act of 1992, Pub. L. No. 102-575, Title XVIII, 106 Stat. 4669.

**Table 1.** Resource considerations and targets related to Lake Powell storage and release operations.

Resource	Annual Operations Influence	General Objective	Storage/Release Target
System Integrity/Continuity	Releases from Powell influence the minimum flows achievable to avoid the devastation of Grand Canyon resources under significantly dry hydrologies.	Prevent Powell releases that are so low they compromise the integrity of the Grand Canyon corridor.	<p><u>Preferred min Grand Canyon flow:</u>  <b>6,000 cfs (~4.34 maf/year)</b>                      Ensures integrity of natural resources and considers the Grand Canyon recreation economy.</p> <p><u>Critical min Grand Canyon flow:</u>  <b>5,000 cfs (~3.23 maf/year)</b>                      Ensures annual connectivity of River system; Avoids flat flow/provides variation of flows to mimic a more natural Grand Canyon hydrograph.</p>
Water Temperature	Powell storage and release volumes and the volume of inflow to Lake Powell have the potential to influence water temps below Glen Canyon Dam. <sup>i</sup>	Strive to support Glen Canyon Dam releases that are warm enough (> 12°C) to allow for Humpback Chub reproduction and growth but cool enough (< 20°C) to preserve Trout and deter reproduction, growth of invasive species.	<p><u>Target 1:</u>                      Powell Elevation above 3,600 ft - release temps become too cold for Grand Canyon flows (&lt; 12°C)</p> <p><u>Target 2:</u>                      Powell Elevation within 3,570-3,575 ft - release temps fit the 12-20°C window that helps avoid invasives bypassing infrastructure and preserves opportunity for HFE (if sediment is present)</p> <p><u>Target 3:</u>                      Powell Elevation below 3,525 ft - release temps become too warm (&gt; 17-20°C) and potential for HFE significantly diminished</p>
Invasive Species	At low Powell elevations, invasive fish species have greater opportunity to pass through the Glen Canyon Dam's facilities and establish populations that impact Blue Ribbon Trout Fisheries and Native Fish at/below Lee Ferry. <sup>ii</sup>	Strive to maintain Powell storage elevations that prevent invasive species from entering the Colorado River below Glen Canyon Dam/Lee's Ferry.	
High Flow Experiments	Experience over the last few years reveals that when Powell storage is low, the opportunity and flexibility to accomplish HFEs (for optics or operational reasons) is significantly diminished.	Strive to maintain Powell elevations that support HFEs (over 24 hours) occurring once every 3 years (if sediment is present in the system), allow for interannual release adjustments (when sediment is present) to support mimicry of natural hydrograph and preserve HFE benefit in upcoming season.	

<sup>i</sup>Mihalevich, B. A., Neilson, B., Buahin, C. A., Yackulic, C., & Schmidt, J. C. (2020). Water temperature controls for regulated canyon-bound rivers. *Water Resources Research*, 56(10), e2020WR027566. <https://doi.org/10.1029/2020WR027566>.

<sup>ii</sup> Melis, T. S., ed., 2011, Effects of three high-flow experiments on the Colorado River ecosystem downstream from Glen Canyon Dam, Arizona: U.S. Geological Survey Circular 1366, 147 p. <http://pubs.usgs.gov/circ/1366/c1366.pdf>

## **ii. Stewardship Target – Upper Colorado River Endangered Fish Recovery and San Juan River Basin Recovery Implementation Programs Example**

If any Alternative analyzed by Reclamation for the post-2026 NEPA process contemplates operations upstream of Powell, then it would be important to include additional stewardship targets for the Upper Basin. For example, The Upper Colorado River Endangered Fish Recovery Program and San Juan River Basin Recovery Implementation Program (Programs) are critical to the river system’s integrity as it continues to experience changes due to climate conditions. The recovery of listed species has been a long-term effort that provides streamlined ESA compliance for thousands of Upper Basin water users by providing benefits to four species of warm-water fish found nowhere else in the world. Climate change has impacted these endangered fish as hotter and drier conditions have lowered river flows in many of the Colorado River’s major tributaries. Management strategies can benefit listed fish through both improving management of reservoirs and focusing conservation efforts above critical habitat reaches.

Specifically, water releases from reservoirs can and should be timed to maximize ecological benefits, including meeting recommended flows for endangered fish and wildlife and providing appropriate water temperatures. This is especially true when operations are changed to address drought or unanticipated circumstances. For example, when the 2019 Drought Response Operations Agreement was implemented, it included timing releases to improve flows in priority reaches.

Similarly, any updates to the DROA or future conservation programs that enable water conservation that are contemplated with or alongside the post-2026 Guidelines could include criteria to prioritize projects that will benefit river reaches with specific environmental needs. This might include a new DROA, additional System Conservation Pilot Program projects or other Upper Basin water conservation programs developed in the future. Such water could be provided at times and in volumes that materially benefit river health while that same water provides greater security for basin-wide management: a classic win-win.

## **iii. Mitigation<sup>6</sup> Goals**

The post-2026 Guidelines will inevitably result in resource impacts throughout the Basin. The NEPA process is intended to inform decision makers of what those impacts may be and consider whether and how new guidelines can be implemented in a manner that mitigates significant effects to the environment.<sup>7</sup> Cooperative Conservation proposes Reclamation define, where possible in the NEPA process, affirmative mitigation measures to be included as part of the post-2026 Guidelines to address impacts identified in Draft EIS. Presumed areas for mitigation consideration (which may evolve based on the EIS analyses) include:

**Lower Colorado River Multi-Species Conservation Program** - The success of the LCR MSCP in creating Colorado River habitats over the past 20+ years is a testament to the collaborative efforts taken to address habitat risks to valuable species of birds and wildlife and cultural heritage while providing greater water security for thousands of water users. As the post-2026 Guidelines consider ways to manage the potential for reduced water deliveries from Lake

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<sup>6</sup> Mitigation refers to “[a]ctions taken to avoid, reduce the severity of, or eliminate an adverse impact.” It can include implementing measures to avoid or minimize the degree or magnitude of identified impacts, or rectifying those impacts by restoration, rehabilitation, repair or offsets to the affected environment. U.S. Bureau of Reclamation. 2022. *Reclamation Library: Glossary*. <https://www.usbr.gov/library/glossary/>

<sup>7</sup> National Environmental Policy Act of 1969, 42 U.S.C. § 4321 et seq. (1970).

Mead, possibly resulting in reduced flows and availability of water in the Lower Colorado River, Cooperative Conservation calls for increased restoration actions in line with anticipated impacts to address increased risks to habitat and cultural heritage along the Lower Colorado River corridor, including those established by LCR MSCP.

**ESA Compliance/Recovery Programs** - Recovery programs throughout the Basin remain important to the river system's integrity. It will, therefore, be important to identify if and how the post-2026 Guidelines will implicate any recovery program and provide opportunity to apply innovative solutions that accommodate continued protection, mitigation, and recovery of species and habitats at a broad scale within the Colorado River Basin.

**Tribal Water Rights and Trust Assets** - Colorado River Basin Tribes have recognized rights to use approximately twenty-five percent of the Colorado River water supply, and many of these Tribal Nations are in the process of quantifying additional rights to Colorado River water. Given this volume of Tribal water, it is imperative to identify relevant "adverse impacts, whether direct, indirect, or cumulative, to Tribal Water Rights [and Tribal trust assets], whether such water is being presently put to use or is as yet unused, when analyzing alternatives considered for incorporation into the post-2026 Guidelines."<sup>8</sup>

**Reduced Supply Impacts** - Having to reduce releases/deliveries from Colorado River reservoirs under different conditions will have inevitable impacts on both the human environment (communities, economies, cultural values, livelihoods) and natural resources (soils, surface and groundwater sources, air, vegetation, wildlife, habitats, etc.). Cooperative Conservation expects the post-2026 EIS to acknowledge the impacts that are the consequence of reduced supplies and demand reductions and outline the possible mechanisms or programs that can work to minimize effects to water users, communities and resources going forward.

**Salton Sea** - The Imperial Valley's participation in innovative Colorado River strategies is key 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. Cooperative Conservation expects Reclamation to anticipate the impacts of post-2026 Colorado River operations to the Salton Sea (including biological resources and air quality changes expected from changes to shoreline dust emissions) and identify the mitigation measures that will be contemplated going forward.

**Salinity changes on Lake Mead storage or water deliveries to Mexico** - Post-2026 operations may affect salinity in the Lower Colorado River, and deliveries to Mexico or storage conditions at Lake Mead may be influenced as a result. Cooperative Conservation expects the post-2026 NEPA analysis to include mitigation measures as needed to ensure: (a) the United States' ongoing compliance with Minute 242; (b) Reclamation's ability to use Yuma-area pumped return flows as a component of delivery to Mexico; (c) Reclamation's ability to deliver the volume of water to Mexico at the rates and times requested (a key area of binational cooperation identified in Minute 323). Reclamation will need to identify, analyze, and describe these impacts to ensure the United States and Mexico can continue to work collaboratively, with shared information, to maintain the benefits achieved under the terms of recent binational Colorado River agreements.

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<sup>8</sup> Colorado River Basin Tribes. (2024, March 11). *Letter to Commissioner Touton, Bureau of Reclamation, regarding common views and expectations regarding alternative(s) that will be analyzed and considered for the Post-2026 Guidelines.*

**Changes in water deliveries or management that impact water quantity in the MODE canal** - The post-2026 Guidelines may affect water deliveries in the Yuma area that drain into the Main Outlet Drain Extension (MODE)<sup>9</sup> canal and are delivered in Mexico to the Cienega de Santa Clara. This Cienega is a large, important wetland that supports rare and endangered species. It is a nesting and feeding site for shorebirds and marsh birds on the Pacific Flyway, and provides habitat for 75% of the remaining population of the Yuma Ridgway's Rail, an endangered marsh bird. Reclamation's NEPA analyses will need to consider impacts of Colorado River operations in the United States on the Cienega de Santa Clara to allow the US and Mexico to identify suitable mitigation opportunities.

**Interconnected systems** - The Colorado River system cannot effectively operate to stabilize conditions at the expense of other watersheds or groundwater resources. Additionally, understanding the demands and constraints of adjacent watersheds/systems could directly or indirectly impact supplies (i.e., transbasin diversions, groundwater supplies) and inform the stability of the Colorado River Basin going forward. As Basin stakeholders work to implement river policies and management decisions to sustain the Colorado River system over the long-term, it will be important to consider ways to minimize 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) groundwater supplies; and (b) transbasin connections like the San Juan Chama/Rio Grande; Colorado River/South Platte/Arkansas to name a few.

### 3. Maintaining Opportunities for Colorado River Delta Flows

Cooperative Conservation includes releases from Colorado River reservoirs that will aid in accomplishing environmentally beneficial flows through the Colorado River Delta. The purpose of this approach is to: (a) ensure that a full range of options are available to consider when engaging in binational solutions through a separate US - Mexico negotiation process; (b) understand the benefits and impacts of potential Delta flows on reservoir operations in the US; and (c) inform the mitigation strategies that will be needed to effectively minimize effects going forward.

***Rationale:** Although Mexico's participation is essential to effective Colorado River management, the process for developing the post-2026 Guidelines is separate from binational collaboration through Treaty Minute negotiations. To avoid precluding opportunities to achieve useful binational agreement, Cooperative Conservation incorporates Delta Flow releases for EIS modeling considerations consistent with existing Colorado River binational frameworks between the U.S. and Mexico.*

Cooperative Conservation proposes a possible 45 thousand acre feet (kaf) Delta flow release each year. Recognizing that such flow would not likely occur each year, the approach also proposes a maximum possible release of 135 kaf in any given year. Actual availability of water for environmental flows, however, would be determined based on agreements between the U.S. and Mexico that have yet to be negotiated.

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<sup>9</sup> The MODE canal is a concrete structure that removes drainage water from farms in Arizona.

#### 4. Flexible and Innovative Tools - Conservation Reserve

Cooperative Conservation includes a “**Conservation Reserve**” tool to replace the existing Lower Basin Intentionally Created Surplus (ICS) program as an innovative mechanism for incentivizing meaningful water conservation and enabling much needed flexibility in annual water use.

**Rationale:** *ICS under the 2007 Guidelines has been successful in encouraging water users to conserve water and boost storage elevations in Lake Mead. However, because ICS “counts” as part of the Lake Mead elevations, the timing of ICS creation and withdrawal has risked influencing Powell releases under coordinated reservoir operations and the extent of shortages applied to Lower Basin water users. At the same time, allowing stored ICS to be used to offset shortages potentially increases the amount of water withdrawn in times of shortage, reducing the effectiveness of shortages in arresting reservoir declines.*

Cooperative Conservation proposes the ICS program transition after 2026 into a Conservation Reserve that authorizes storage and movement of conserved water on top of the normal system operating pools in an operationally neutral manner. This program would maintain benefits of the ICS program, including incentivizing conservation to allow participating water users to offset shortages in particular years. It would also allow the actions to occur without increasing risks to others. Because the reservoirs’ system water would be unaffected by water in a Conservation Reserve pool, the program would also provide flexible opportunities for moving conserved water where it can provide the most operational and environmental benefits without affecting available water supplies to Upper or Lower Basin water users. In this way, the program can offer an incentive structure for conserving Colorado River water that can also help protect critical infrastructure, meet important environmental targets, improve hydropower generation, and/or provide other resilience benefits.

**\*\*\* Because the Conservation Reserve tool has the potential to provide flexibilities and mitigation benefits beyond environmental priorities identified in this proposal, the Conservation Groups requests that Reclamation treat the Conservation Reserve as a standalone tool to be analyzed for impacts and mitigation benefits as part of other alternatives and/or as the sensitivity analyses for each of the alternatives in the post-2026 EIS. \*\*\***

##### **i. Conservation Reserve Framework**

To be effective, the Conservation Reserve tool must encourage water users to conserve water that can be stored and delivered as needed without affecting regular reservoir operations. A Conservation Reserve framework must allow for the reserved water to be:

- (1) **Invisible to available system storage.** Colorado River reservoir release determinations would not be influenced by storage or movement of water reserved under the Conservation Reserve. Instead, the water conserved in the program would be reserved as “top storage” that would be invisible when assessing the available storage within the system.
- (2) **Operationally neutral, but still beneficial.** Because water reserved under the Conservation Reserve would not be counted in setting reservoir release volumes, supplemental deliveries would not impact the amount of storage available to other users – it would be “operationally neutral” as if it was never stored or withdrawn.

However, stored water under the program would still be allowed to keep reservoir levels higher than they would otherwise have been (consistent with #6 below). To manage this effectively, Reclamation would need to maintain and publish clear records that account for system storage as the basis for annual operations as well as for reserve bank storage as the basis for flexible management on top of system storage within the reservoirs.

- (3) **Typically created via reduced use/increased supply.** Reserved conservation water would continue to be created by measurably reducing consumptive uses or augmenting the Colorado River system in a particular year. Once created, reserved water would be retained in the Conservation Reserve pool until delivered at the request of the water user who created it. **NOTE:** Upon future negotiation and agreement, the Conservation Reserve may also work to accommodate the unique characteristics of Tribal water rights and empower Tribes to use their water in more flexible ways.
- (4) **Available for delivery on top of normal entitlements.** Water users with water in the Conservation Reserve could choose to deliver their reserved conservation water “on top” of their normal entitlements, including to supplement deliveries in shortage years or to meet compact obligations.
- (5) **Subject to an evaporation/system assessment and spill.** All water reserved in a Conservation Reserve would be subject to an evaporation/system assessment. In the event the reservoir fills (ie. there is no longer enough remaining empty active storage space to retain Conservation Reserve water), the water reserved in the program would be spilled on a 1:1 basis.
- (6) **Stored and moved where needed for operational and environmental benefits.** Because water reserved under the Conservation Reserve would be invisible and operationally neutral to calculations of storage available for release from Lake Powell and delivery from Lake Mead (See Dual Indicator Operations, above), there can be greater flexibility to provide operational and environmental benefits as needed.

## ***ii. Benefits of the Conservation Reserve Tool***

Reclamation’s ability to flexibly manage the reserve water to provide greater resiliencies within the Basin is essential to long-term stability of the Basin. By making the creation (“puts”) and withdrawals (“takes”) of water reserved in a Conservation Reserve “operationally neutral,” the top storage approach of the Conservation Reserve tool could allow the amount in a reserve to be increased substantially without increasing interbasin or water user risks. Similarly, greater flexibility could potentially be allowed in the volume of “puts” and “takes” permitted from the reserve pool in any particular year.

While rules would need to be adopted to protect water user interests and prevent undesirable impacts, Reclamation could also gain useful management flexibility by enabling the water reserved under a Conservation Reserve to either be stored or moved without affecting water users in either the Upper or Lower Basins. For example, Reclamation could move conservation reserved water as needed to assist in:

- Ensuring river connectivity through the Grand Canyon;
- Striving to maintaining temperature condition windows that aid native fish and deter invasive species; and
- Accomplishing HFEs that would otherwise not be achievable due to Basin conditions

Reclamation also could move water in the Conservation Reserved water between reservoirs for operational benefits such as:

- Protecting human health and safety under extreme dry conditions;
- Holding additional water in Powell to protect critical infrastructure;
- Holding additional water in Mead to protect intake levels and critical elevations; or
- Boosting hydropower production during particular periods.

If Reclamation temporarily moves Conservation Reserve water from upstream (i.e. Powell) for operational and environmental benefits, it could be recaptured at the next reservoir (i.e. Mead), and moved back upstream by reducing flows in subsequent water years. When the Conservation Reserve water is finally ordered for delivery by the water user who created it, Reclamation could adjust the relative deliveries accordingly (within the limits of permitted operations). Because all water reserved in the Conservation Reserve would be invisible to the determination of system water available for release under normal reservoir operations, adjusting reservoir releases to deliver the Conservation Reserve water does not change water availability or create risk for any upstream or downstream water user.

Initial rules and priorities to guide modeling of the Conservation Reserve for the post-2026 NEPA process are listed in Section D.3. We would like to explore these and other variables with the Colorado River community to evaluate the benefits and impacts of the Conservation Reserve tool as applied to various alternatives evaluated through the post-2026 NEPA process.

### ***iii. Additional Conservation Reserve Opportunities***

The Conservation Reserve does not have to be limited to Lower Division water users. An Upper Basin Conservation Reserve pool could similarly be treated as operationally neutral, without affecting the releases of water from the Upper to the Lower Basin. It could work to help provide compact compliance benefits if it was deemed necessary during low-flow sequences by the appropriate decision makers. Even if compact compliance is not at issue, an Upper Basin Conservation Reserve pool could be used to promote temporary and voluntary conservation that helps increase the flexibility of water uses within the Upper Basin from year-to-year water.

Similar Conservation Reserve rules could also be applied to water stored in the Mexican Water Reserve, which could allow for expanded international use of voluntary storage on the same terms. Such rules could also extend to aid in providing flows through the Colorado River Delta (if agreed to in US - Mexico agreements).

As alluded to above, if future negotiations result in relevant agreements, the Conservation Reserve may also be structured to include the range of Tribal water rights in the Colorado River Basin, providing a mechanism to “[e]nsure that the eligibility and participation requirements of any conservation programs included in the post-2026 Guidelines are established and operated in a manner that maximizes Basin Tribes’ ability to participate in them without triggering onerous financial burdens.”<sup>10</sup>

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<sup>10</sup> Colorado River Basin Tribes. (2024, March 11). *Letter to Commissioner Touton, Bureau of Reclamation, regarding common views and expectations regarding alternative(s) that will be analyzed and considered for the Post-2026 Guidelines.*



## D. Cooperative Conservation Modeling Considerations

Taking all the elements and priorities outlined above, Cooperative Conservation proposes the following continuous curve management approach for Lakes Powell and Mead under different storage conditions, to which we apply the flexible Conservation Reserve as a tool. Importantly, this Cooperative Conservation management approach is intentionally distinct and different from those presented in the current Upper Division and Lower Division State proposals. We have taken this approach primarily to propose operations that achieve greater reliability for water supplies AND improved outcomes for river-related ecosystems. We have also taken this approach to aid Reclamation's efforts to build out a reasonable range of management options to evaluate, and thereby provide greater confidence and credibility to this important NEPA process.

To be clear, our use of the following "continuous-response curve" management approach does not reflect any shared position among the Conservation Groups as to the reasonableness of other proposals submitted to Reclamation or how changes in available water supplies should be absorbed within the Basin. We understand and respect that changes to reservoir release regimes at Lakes Powell and Mead implicate the rights and authorities of federal, state and Tribal entities as well as stakeholders throughout the Basin, and that ongoing negotiation and discussions with a goal of reaching workable solutions for sustaining the Basin will continue to be important during each phase of the NEPA process.

### 1. Lake Powell Reservoir Regime for EIS Modeling Purposes

Cooperative Conservation proposes modeling a Lake Powell reservoir management regime that involves a "continuous-response" storage and release curve based on observed conditions of available live CRSP Initial Unit Storage on October 1 of each year. This curve gradually alters annual releases from Lake Powell in response to system storage,<sup>11</sup> applying the Dual Indicator Operations and incorporating the stewardship considerations for Lake Powell storage as described above and based on the steps outlined below. Table 2 summarizes the Lake Powell Reservoir Regime and Figure 2 provides a conceptual illustration.

Step 1. Develop a baseline continuous release curve relating Lake Powell releases to the observed storage conditions at the CRSP Initial Units on October 1, providing larger releases when the CRSP storage is above 60% (Powell storage is likely to be above 3,600 feet.) Calculated baseline releases are continuously and smoothly reduced until the CRSP storage reaches 40% (and Powell storage is likely to be near 3,525 feet). When combined storage is less than 40%, follow run-of-river operations.

Step 2. Apply a known, reliable, agreed-to Climate Response Indicator adjustment to account for anticipated loss in net storage that may occur in out years (see Dual Indicator Operations, Section C.1).

Step 3. Adjust the potential release volume to proactively account for the likely future condition of storage at the CRSP Initial Units as dictated by the Dual Indicator Operations. The adjusted point on the curve would establish the water available for release for the Water Year.

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<sup>11</sup> Combined storage refers to Lake Powell and the CRSP Initial Units, as well as Lake Mead, Lake Mohave, and Lake Havasu.

**Table 2. Lake Powell Reservoir Regime**

<b>Observed Pool Elevation at Powell on Oct. 1 (As approx. CRSP % full)</b>	<b>Lake Powell Water Year Release</b>	<b>3-year Average Hydrologic Adjustment<sup>i</sup></b>
100% (Assumes Upper CRSP IU Storage mostly full and Powell at elevation 3,700 feet)	Flood Control / Dam Safety Releases	Begin making reductions in Powell releases when CRSP storage is $\leq$ 70% with full adjustments when CRSP storage $\leq$ 50%: If trend < 10 maf, then adjust Powell releases down 0.5 maf If trend < 8 maf, then adjust Powell releases down 1.0 maf
70%-100% (Assumes Upper CRSP IU Storage mostly full and Powell at or above ~3,600 feet)	8-10 maf	
50% - 70% (Assumes Upper CRSP IU Storage mostly full and Powell below elevation 3,600 and at or above ~3,525 feet)	7-8 maf	
37%-50% (Assumes Upper CRSP IU Storage mostly full and Powell below elevation 3,525 and at or above 3,510 feet.	6-7 maf	
< 37% (Assumes Upper CRSP IU Storage mostly full and Powell at or below elevation 3,510 feet)	Run of River up to 6 maf (adj. for trend)	

<sup>i</sup>Through preliminary modeling, Cooperative Conservation relied on the 3-year hydrology inflow metric in Reclamation’s webtool as a stand-in/proxy for the appropriate, agreed to Climate Response Indicator to apply going forward.

# Lake Powell Reservoir Regime

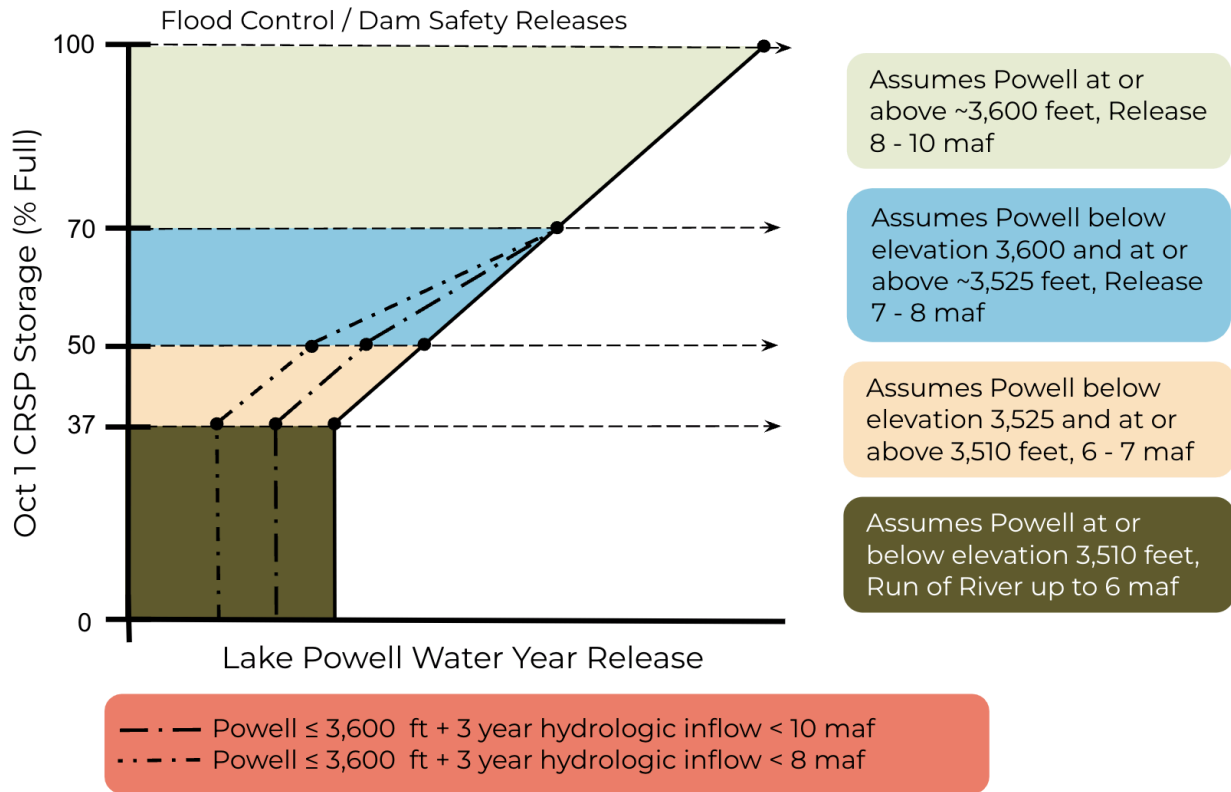


Figure 2. Conceptual illustration of Lake Powell Release Regime

## 2. Lake Mead Reservoir Regime for EIS Modeling Purposes

To continue with the exploration of a “continuous-response” methodology, the Lake Mead reservoir management regime similarly includes a baseline Lake Mead storage and release curve based on observed conditions of available live whole system storage on October 1 of each year.<sup>12</sup> This curve also applies the Dual Indicator Operations and incorporates the stewardship and Delta flow considerations for Lake Mead storage as described above. Table 3 summarizes the Lake Mead Reservoir Regime and Figure 3 provides a conceptual illustration.

Step. 1 - Develop a baseline continuous delivery reduction curve relating Lake Mead deliveries to observed (and available) live storage from CRSP Initial Units, Lake Mead, Lake Mohave and Lake Havasu on October 1, allowing larger Mead deliveries when the whole system storage is closer to full (e.g. >80%), and reduced releases down to a minimum level when the system is low (e.g. <10%). In contemplating Lake Mead storage and deliveries, factor in the potential for creating up to 45 kaf of binational water annually and for a 135 kaf release of that water every three years to keep the possibility of a Delta Flow release open during US/Mexico negotiations.

<sup>12</sup> The October 1 observation date is proposed for simplicity and with the understanding that the difference between system storage on observed conditions earlier in the year (August 1) will not be that much different from those on October 1. The actual date of observed conditions to apply to the Lake Mead reservoir regime can be modified if agreed to by appropriate authorities going forward.

Step 2. Apply a known, reliable, agreed to Climate Response Indicator adjustment to account for anticipated loss in net storage that may occur in out years (see Dual Indicator Operations, Section C.1).

Step 3 - Adjust the potential delivery volume to proactively account for the likely future condition of whole system storage given those trends. The adjusted point on the curve would establish the water available for delivery for the upcoming Calendar Year.

**Table 3. Lake Mead Reservoir Regime**

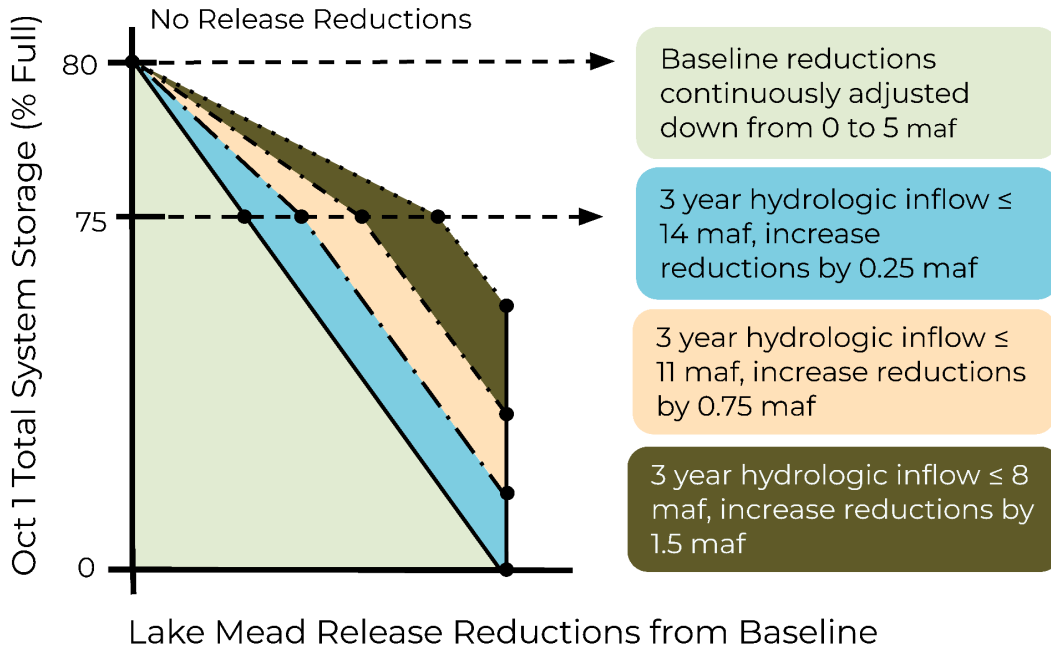
Observed Whole System Storage (Oct. 1)	Release Reductions	3-year Average Hydrologic Adjustment <sup>i</sup>	Potential for Delta Release Accommodation <sup>ii</sup>
Above 80% full	No release reductions	Begin making additional reductions when system storage is at 80%, with full reduction adjustments occurring when system storage is below 75%: If trend ≤ 14 maf, increase reductions by 0.25 maf If trend ≤ 11 maf, increase reductions by 0.75 maf If trend ≤ 8 maf, increase reductions by 1.5 maf Maximum reductions cannot exceed 5 maf	Allow for release of Delta Flows of up to 45 kaf/ year (based on water provided by Mexico, NGOs and the US) with a maximum flow of 135 kaf if accumulated on a three year average.
80% - 0% full	Baseline reductions continuously increase from 0 to 5 maf <sup>iii</sup>		

<sup>i</sup> Through preliminary modeling, Cooperative Conservation relied on the 3-year hydrology inflow metric in Reclamation’s webtool as a stand-in/proxy for the appropriate, agreed Climate Response Indicator to apply going forward. We would like to explore several approaches to establishing potentially-useful Climate Response Indicators as part of the further development of our alternative.

<sup>ii</sup> To keep options for binational negotiations open, the Conservation Groups recommend the post-2026 NEPA process consider the possibility of Delta Flow releases as part of the post-2026 NEPA process, recognizing that such flows would only be authorized if the US and Mexico negotiate for such flows under an agreement separate from the post-2026 Guidelines.

<sup>iii</sup> Delivery reductions or contributions to storage (whatever the case may be) must be determined after discussion and agreement among federal, state, and Tribal governments and stakeholders in the Basin. In the absence of other solutions proposed by Basin sovereigns, Cooperative Conservation assumes for modeling purposes that the first 1.5 maf of reductions would be applied to the Lower Basin (in line with both the Upper and Lower Division State Alternatives). The remaining delivery reductions or contributions to storage could be applied under various scenarios, after carefully considering the rights and interests of Tribes, states, and water users throughout the Basin. The Conservation Groups look forward to working with Reclamation and others to identify what scenario(s) would be most useful to fully inform the post-2026 NEPA analysis going forward. Regardless of the scenario(s) that are ultimately adopted, this Alternative is only intended to provide Reclamation additional options for broadening the range of the post-2026 EIS analysis and is NOT an expression of opinion as to the reasonableness of any proposed alternatives that have been submitted at this time.

# Lake Mead Reservoir Regime



Allow for release of Delta Flows of up to 45 kaf/year with a maximum flow of 135 kaf if accumulated on a 3 year average.

**Figure 3.** Lake Mead Delivery Regime - conceptual illustration

### 3. Conservation Reserve Goals and Priorities for EIS Modeling Purposes

As mentioned above, the Conservation Groups would like to work with Reclamation, the Basin States, Tribes, and Colorado River stakeholders to analyze different approaches to addressing the variables involved in operationalizing an innovative tool like the Conservation Reserve. For preliminary modeling purposes, Cooperative Conservation assumes the following basic rules and priorities:

#### i. Basic Conservation Reserve Operating Rules

1. Assume a combined total reserve bank in Lakes Powell and Mead of up to 8 maf of conserved or non-system water created by Lower Division States water users with the potential for other participants to utilize the reserve if agreed to at a future time.
2. Apply the parameters of a Conservation Reserve tool as described in Section C.4 above:
  - a. Do not count Reserve water as part of available system storage.
  - b. Keep Reserve water operationally neutral, but still beneficial.
  - c. Allow Reserve water to be created via reduced use/increased supply, with the potential for accommodations made for developed and undeveloped Tribal rights.

- d. Allow Reserve water to be delivered on top of normal entitlements.
  - e. Subject Reserve water to an evaporation/system charge and spill.
  - f. Allow Reserve water to be stored and moved where needed to provide benefits to the system. (See priority listing below).
3. For creation of Reserve water, allow for “pre-conservation” to account for reductions in system deliveries so that water stored in a previous year could be delivered to offset reduction volumes and/or to avoid inadvertent overruns.
  4. For delivery of Reserve water, allow those who reserved water in the Conservation Reserve to receive delivery “on top” of their normal entitlements, including to supplement deliveries in shortage years provided that such delivery does not allow any state to exceed its basic apportionment when reductions apply in the Lower Basin.

**ii. Basic Conservation Reserve Water Storage/Movement Priorities**

1. Protect human health and safety within the Basin.
2. Protect critical infrastructure - Mead elevation 1,000 feet and Powell elevation 3,500 feet.
3. Allow for delivery of Reserve water to the water user who created it.
4. Promote favorable storage/release conditions at Lakes Powell and Mead that:
  - a. Protect minimum flows through the Grand Canyon of at least 5,000 cfs, and ideally 6,000 cfs with the potential for flow variability throughout the year (not flat flow).
  - b. Assist in accomplishing a regular 45 kaf/year flow or 135 kaf flow every 3 years to the Colorado River Delta if negotiated and agreed to as part of a separate agreement with Mexico.
  - c. Support conditions to help mitigate native and invasive fish impacts by maintaining, to the extent practicable, Powell storage between elevation 3,530 and 3,600 feet, with priority for elevation 3,570-3,575 feet at critical times of year.
  - d. Improve opportunities for High Flow Experiments and natural hydrographs through the Grand Canyon, when sediment is in the system by supporting conditions to maintain, to the extent practicable, storage at Powell above 3,525 feet.
  - e. Enable maintenance and enhancement of conservation areas as part of or in addition to the LCR MSCP.
  - f. Protect hydropower heads at Glen Canyon Dam or Hoover Dam.

**E. Parallel Programs, Processes, and Actions**

While new guidelines are pivotal to successful management of the Colorado River in the post-2026 era, they will not be enough to surmount the Basin's long-term challenges alone. Additional programs, processes, and actions from all economic/water use sectors, located throughout the Basin, will still be required and must be taken in conjunction with new guidelines to adapt and build the Basin's resilience to an increasingly dry and variable system. This includes: (1) protecting and restoring forests, headwater streams and water-dependent habitats to help build the Basin's overall resilience to climate change impacts; (2) empowering Basin Tribes to have access to and be able to use their water rights in flexible ways; (3) adapting agriculture to a hotter and drier future by improving water use practices, updating infrastructure, and identifying opportunities for water-saving crops; (4) adopting

greater water conservation and efficiency practices for urban and industrial sectors throughout the Basin; (5) promoting effective, flexible, and innovative water management and conservation opportunities in all parts of the Basin, and (6) other improvements. Achieving these improvements to help provide the stability the Colorado River community needs will require targeted programming with durable funding in parallel with new guidelines to mitigate natural hazards, improve resilience, and combat the urgent, broad, and diverse challenges facing the Basin.

## F. Reservation of Rights

Operations and strategies proposed by Cooperative Conservation do not represent a waiver of rights, claims or defenses that may accrue under federal or state law, administrative rule, regulation or guideline. Requests by the Conservation Groups for Reclamation to analyze Cooperative Conservation does not serve 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, each of the Conservation Groups reserve the right to provide further comments and engage with Reclamation through ongoing phases of the post-2026 NEPA process.

## G. Conclusion

The Conservation Groups appreciate Reclamation's consideration of Cooperative Conservation as an Alternative. We ask that Reclamation advance this proposal through its NEPA process and model and evaluate its impacts on the Basin's natural, socio-economic, and cultural resources in the Draft EIS for Post-2026 Colorado River Guideline Operations and Strategies. We are available to discuss the details with you, Basin States, Tribes, Mexico and other stakeholders as appropriate. We remain committed and look forward to collaborating with Reclamation and the Colorado River community to work through the next NEPA phases to arrive at workable, consensus based solutions for the benefit of the Basin as a whole



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