The EcoMedia Compass
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RE: crbpost2026@usbr.gov
Dear U.S. Bureau of Reclamation,

On behalf of The EcoMedia Compass Board of Directors we respectfully submit the following comments for development of the Post 2026 Colorado River reservoir operations EIS scoping process.

In the NEPA review following this scoping process, Reclamation needs to consider current impacts of the existing water management policy on the Colorado River, including the Quantification Settlement Agreement (QSA) and the Drought Contingency Plan and the potential impacts of changes to water management policy. The review needs to note the effects of past actions and analyze the effects of possible alternative actions.

In the 2003 draft SEIS review of current Colorado River policy, Reclamation analyzed socioeconomic and agricultural impacts to the Salton Sea region but did not analyze the air quality impacts, water quality impacts, nor impacts on habitat, nor on environmental justice, nor impacts to the local Tribes. Reclamation also did not conduct a Clean Air Act conformity analysis, nor analyze impacts on the Salton Sea under the Clean Water Act. These analyses need to be part of the Colorado River Basin Post 2026 EIS because the Salton Sea region is deeply impacted by changes to Colorado River management policy.

Reduced downstream deliveries due to current and anticipated reservoir and hydrologic conditions on the Colorado River present significant and damaging risks to the public and ecological health of the Salton Sea region. The Department of Interior's past stance that Colorado River cuts do not impact the Salton Sea is outdated and not shared by Salton Sea stakeholders, most notably, the public. The EIS for post 2026 Colorado River operations must include a full assessment of all impacts to the Salton Sea Region.

For thousands of years water in the current Salton Sea basin was directly hydrologically connected. Flood flows on the Colorado River would redirect southward flow through present day Mexico, to the north to fill the basin creating Ancient Lake Cahuilla, which was a body of water vastly larger than the Salton Sea of today that reached north to Indio and overflowed south of present-day Mexicali to the Sea of Cortez. Ancient Lake Cahuilla filled and dried many times over recent millennia with River course changes from natural flooding. The most recent filling of the Salton Sea basin in 1905/1906 was the result of flooding that washed out levees weakened by ill timed cuts meant to wash out sediment. Yet again the Colorado River flowed north to partly refill the Salton Sea basin until many tons of rock cut and transported by the Sothern Pacific Railroad filled the breaches. The system of dams built on the Colorado River in the early 20th Century now prevent the natural flooding that occurred in prior centuries. Now the hydrological connection of the Colorado River to the Salton Sea is less direct, but still there is a connection.

As envisioned by land and water developers in the late 19th century and early 20th century, Colorado River water flows to farms, businesses, and municipalities in the Imperial and Coachella Valley, then drains to the Salton Sea as agricultural, industrial, and municipal wastewater. The Salton Sea depends on the Colorado River for its continued existence as a natural resource. Irrigation runoff from farms in the Valleys has kept the lake sustained for over a century. Since water transfers from agricultural regions to urban areas began in the 1980s, but most significantly under the 2003 Quantification Settlement Agreement, the Salton Sea, its surrounding communities, ecosystem and wildlife are suffering devastating consequences of reduced inflows to the lake. Now water users

in the Salton Sea basin are being asked to cut additional deliveries to farms and implement conservation efficiency and fallowing to generate enough storage to protect reservoir elevations. These cuts are unlikely to end after 2026.

While the direct results of significant water conservation efforts will have a beneficial outcome by protecting critical elevation levels in Lakes Powell and Mead, the indirect and cumulative repercussions to the Salton Sea region have not previously been considered for the operating guidelines and must be addressed and analyzed going forward. The anticipated environmental effects of further reduction of agricultural inflows to the Salton Sea are identified as impacting:

•Public health and safety
•Air quality
•Water quality and quantity
•Wildlife and vegetation, including endangered, threatened, and other special status species
•Wildlife movement corridors and migratory patterns
•Soils and lakebed
•Wetlands, and riparian areas
•Cultural and Archeological resources
•Visual resources and scenic values
•Recreation and tourism
•Economic losses and poverty of disenfranchised communities

The analysis in the Colorado River Basin Post 2026 EIS must consider and analyze potential impacts on the Salton Sea ecosystem that include:

Elevation Reduction Impacts
•A swift, sharp drop in Salton Sea elevation will result from major cutbacks. QSA transfers have already reduced the Salton Sea elevation by close to 12 feet since 2003 exposing tens of thousands of acres of lakebed. The lake could lose approximately another 30 vertical feet, exposing vast areas of lakebed sediments and becoming a source of fugitive dust. Air quality in the Coachella, Imperial and Mexicali Valleys is chronically impaired by multiple pollutants, especially particulate matter pollution (PM2.5 and PM10). Wind events and dust storms are a common occurrence in the Salton Sea region, causing high levels of PM10 to pollute the air.

Public Health and Quality of Life Impacts of Elevation Reduction
•The Salton Sea region, consisting of Imperial County and Eastern Riverside County, is known for PM10 dust and PM2.5 particulate pollution. According to the International Journal of Environmental Research and Public Health and the California Department of Public Health, Imperial County is already challenged with the highest rate of asthma related emergency room visits by children aged 5-17 of any County in the State at twice the State average. Children often have to kept inside at home and at school due to poor air quality. Exposed Salton Sea lakebed has been shown to produce particulate pollution, particularly in the PM10 size range, sometimes causing complete whiteout conditions during high winds. Large areas of Salton Sea lakebed are composed of fine sediments that produce PM10 dust. Short term PM10 dust exposure exacerbates chronic respiratory conditions including asthma and bronchitis. Long term particulate exposure has been linked to lung cancer (Reference 6). The elderly are also part of the vulnerable population affected by the poor air quality. Thousands of residents in Imperial and Eastern Riverside County live in close proximity to the Salton Sea and are already at risk. The area's public health crisis will be exacerbated by lakebed exposure due to less water flowing into the Salton Sea.

Economic Impacts of Elevation Reduction

•Reduced water deliveries to Imperial Valley will negatively affect not only air quality, but the economy of the region. In 2020, the EPA declared Imperial County as no longer in violation of air quality standards and re-designated the County as in attainment for PM pollution. Imperial Valley was a non-attainment zone for many years. It took at least 2 years for the recent EPA re-designation. EPA premised this decision on the assurance that any future water transfers would include air quality mitigation measures. Loss of this attainment designation will cause a wide range of economic activities in the region, including agriculture and industry, to be restricted to make-up the loss. Airborne dust can also damage crops and the toxic components in the lakebed sediment blowing into crops is a concern for food safety.

Impacts of Rising Salinity

•An accelerated increase in salinity to where only halophytic algae, bacteria and perhaps some aquatic invertebrates could survive. The federally endangered Desert Pupfish and largely collapsed population of Mozambique tilapia will be completely decimated in the lake. The loss of the fishery will have disastrous consequences for piscivorous (fish-eating) birds that rely on the Salton Sea. California has lost roughly 90% of the wetlands that sustained wildlife before the 19th and 20th Century (Reference 5). The Salton Sea filled part of that gap, until recently sustaining millions of fish and over 400 species of birds. It is imperative to preserve the Pacific Flyway and protect the unique biodiversity of the Salton Sea ecosystem. Ensuring the piscivorous birds have a sustainable food source and deep-water habitat must be a priority at the Salton Sea.

Quantification of Salton Sea Impacts Assuming 250,000 AFY IID Conservation

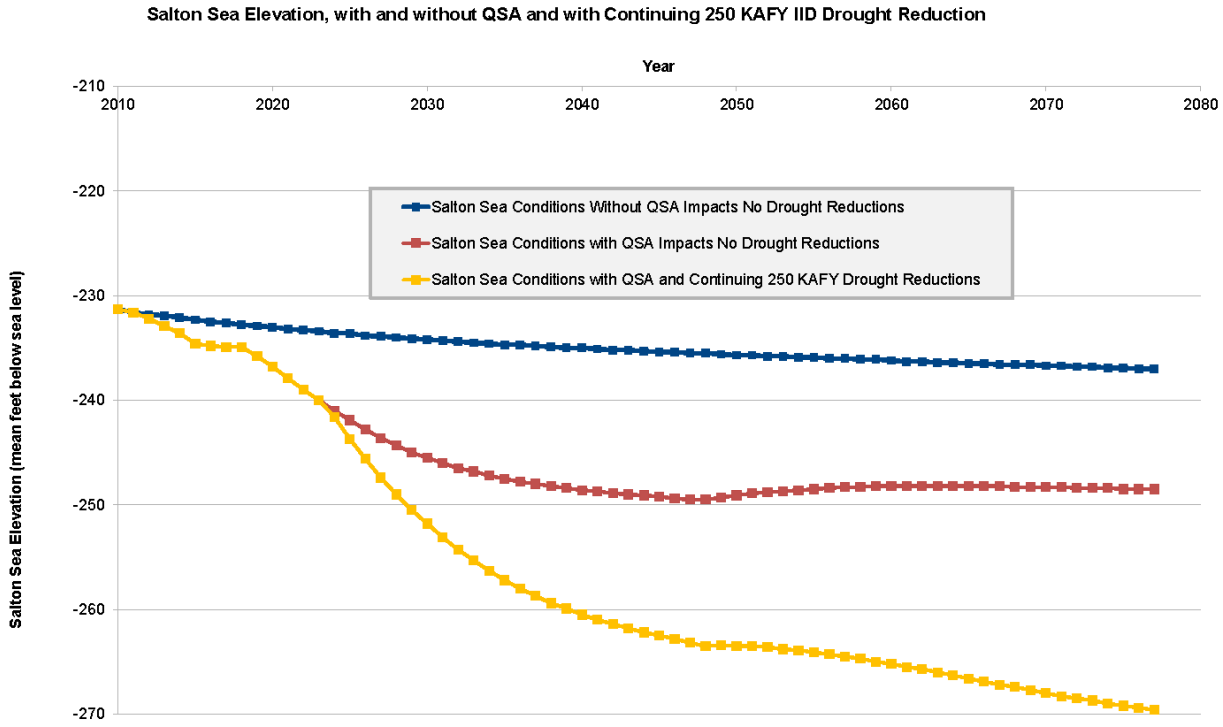


Chart 1. 55 year 250 KAFY irrigation flow reduction impact on Salton Sea elevation

The Salton Sea will be dramatically impacted by reduced irrigation flows to the Imperial Valley if recent agreements to conserve 250 KAFY for four years extend to the long term. Irrigation drainage from the farms in the Imperial Valley, plus some cross border flow from Mexico, supplies roughly 90% of the inflow to the Salton

Sea. For every three acre feet of water conserved by fallowing in the Imperial Valley one acre foot of drain water that would have flowed to the Salton Sea will instead be cut from normal inflows. For water conserved by on farm efficiencies the ratio of inflow reduction to the Salton Sea is one to one, meaning every acre foot of irrigation water cut is an acre foot of inflow cut from the Salton Sea. An extended conservation of 250 KAFY by fallowing, converting gradually to on farm efficiencies, will accelerate the loss of elevation of the Salton Sea, already underway due to water transfers, until it fully dries up by 2080, see Chart 1 above.

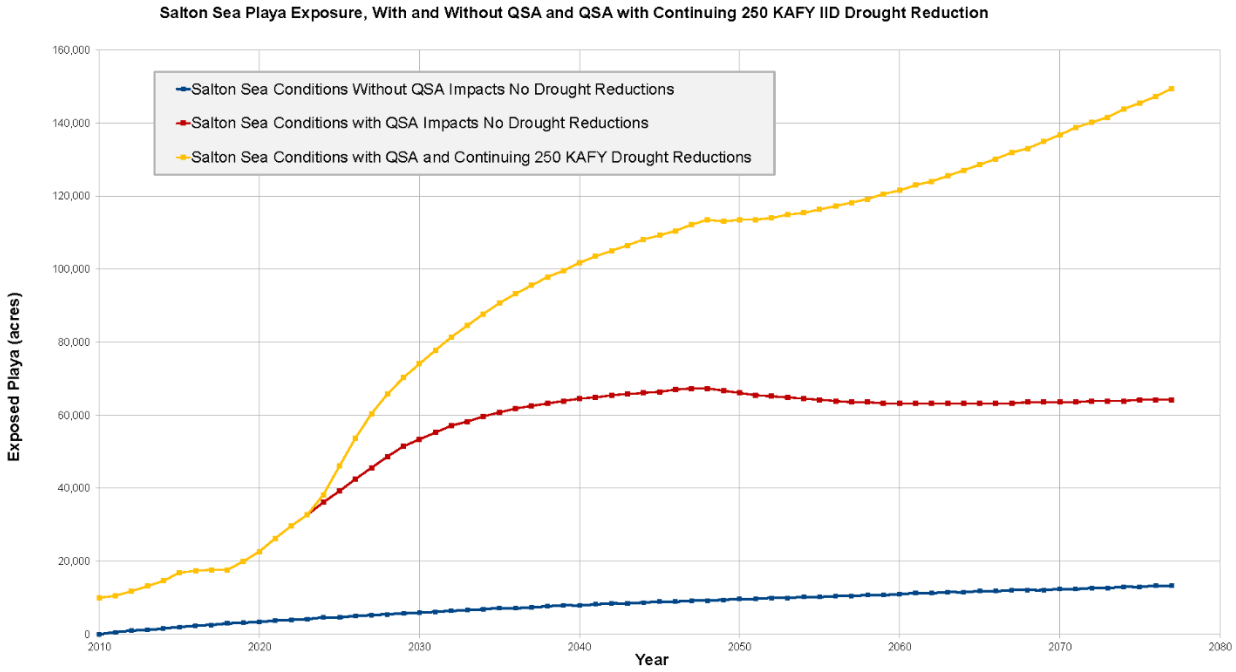


Chart 2. Four year 250 KAFY irrigation flow reduction impact on lakebed exposure at the Salton Sea

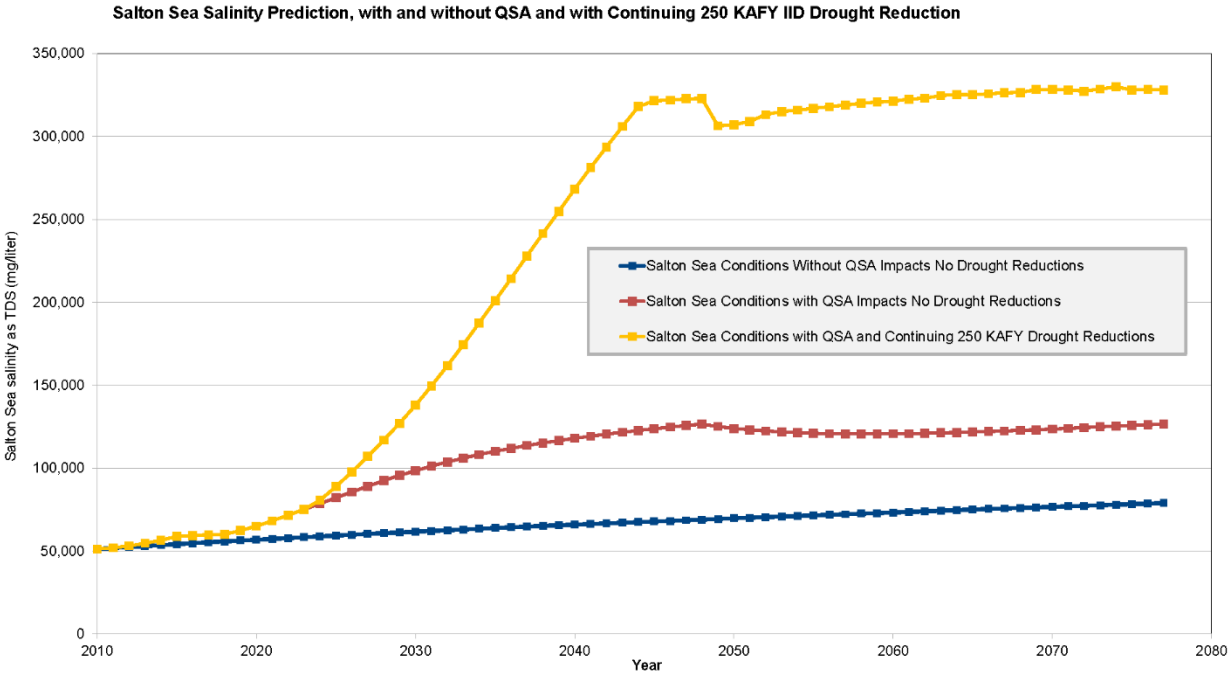


Chart 3. Four year 250 KAFY irrigation flow reduction impact on salinity at the Salton Sea

The accelerated loss of elevation will consequently accelerate the exposure of potential PM10 dust emitting lakebed at the Salton Sea to 150,000 acres, see Chart 2 above, releasing far more PM10 dust into nearby lakeshore communities sooner than will happen with QSA transfers alone.

The other concern is salinity rise. The draining of excess salt from farms into the Salton Sea is necessary for local agriculture, but all salts are retained in the terminal lake. The shrinking of the volume concentrates the salts, which in turn is now killing off fish and other macroscopic life in the Salton Sea with rapid salinity rise. Reduced irrigation flows of 250 KAFY will push salinity in the Salton Sea to complete aquatic ecosystem collapse within four years, and reach full salt saturation by 2045, see Chart 3 (see Reference 7 for calculations).

What is Needed is Water

In order to prevent a worsening public health crisis, protect the underserved shoreline communities and revitalize the ecological values of the Salton Sea, the operating guidelines must incorporate an environmental water budget and benefits going forward. This environmental water budget should pay a reasonable amount for each acre foot of water cut from the Salton Sea region into a fund to secure alternative water sources to offset the impacts of Colorado River water supply cuts. The Clean Water Act and Public Trust Doctrine are applicable to the Salton Sea. The Salton Sea is a public resource sustaining an ecosystem that is a major component of the Pacific Flyway, has supported recreational uses over decades and moderates temperature extremes that affect farming by reducing impacts of frost and extreme heat. Restoration and enhancement of wetlands at the Salton Sea reduces open playa, eliminating airborne dust. This provides a dual benefit to humans and wildlife. Protecting natural resources should be considered as an effective solution to address the intensifying repercussions on the Salton Sea.

The Ca. Fish and Game Code § 2940 calls for more than mitigation. It calls for true restoration of the Salton Sea ecosystem.

“In restoring the Salton Sea, it is the intent of the Legislature to DO all of the following:
(1) Protect and provide long-term conservation of fish and wildlife that are dependent on the Salton Sea ecosystem.

(2) Restore the long-term stable aquatic and shoreline habitat for fish and wildlife that depend on the Salton Sea.

(3) Protect water quality.

(4) Maintain the Salton Sea as a vital link along the Pacific Flyway.

In addition, the Stipulated Water Order 2017-0134 calls for 14,900 acres of habitat and 14,900 acres of dust mitigation at the Salton Sea by 2028. The State of California, through its Salton Sea Management Program (SSMP), is attempting to mitigate the environmental disaster at the Salton Sea by implementing the 10 Year Plan. However, the State is a great deal behind schedule in their dust abatement efforts. Furthermore, the effects of low runoff from Imperial Valley farm drains will exacerbate the public health threat and ecological collapse.

Solutions:

Water Supply from Local Groundwater

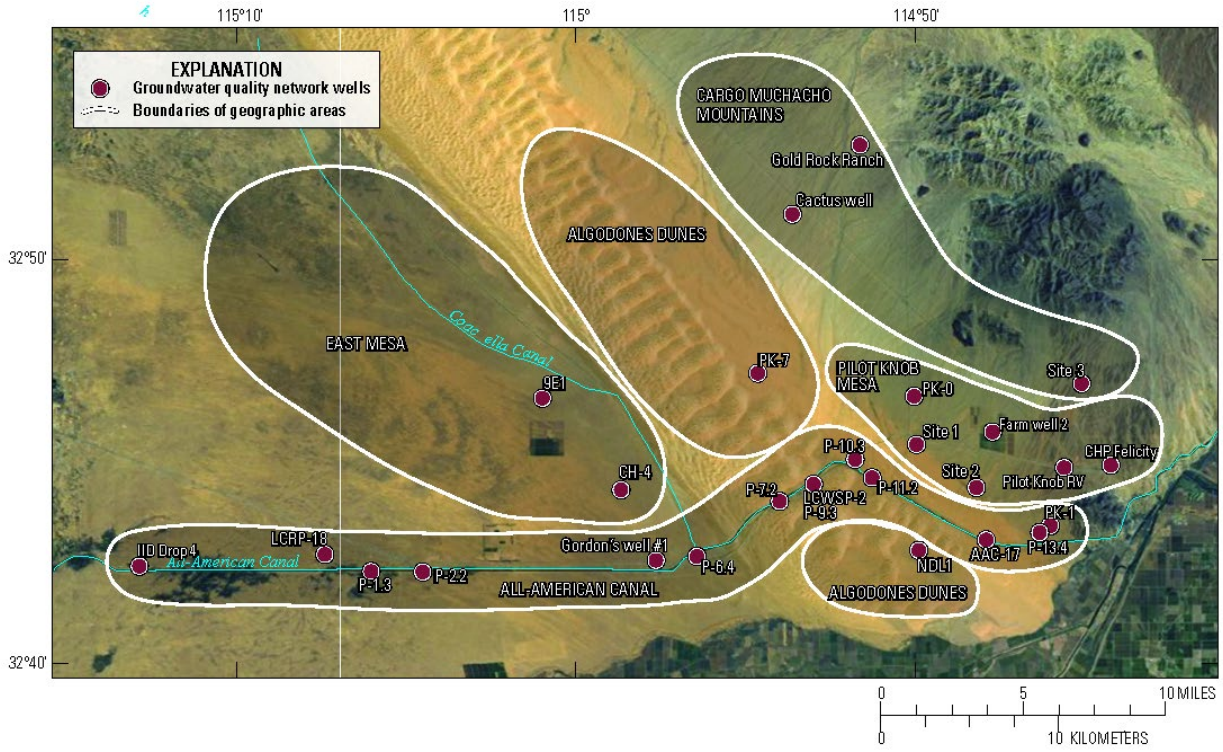
These impacts could be mitigated by a make-up inflow of groundwater up to 250,000 AFY in the short term. This is a proposed new water source for the Salton Sea. The groundwater would be recovered by wellfields on the southeast side of the Salton Sea accessing brackish groundwater available from the East Mesa area as far

south as the All American Canal and north to Iris Wash. This groundwater is available under undeveloped desert areas east of the East Highline Canal and can be recovered from a few hundred feet depth or less and delivered to the Salton Sea through the unused unlined section of the Coachella Canal, the Iris Wash, and the Z Drain (see Map 1). Much of the conveyance infrastructure already exists in the old abandoned Coachella Canal and IID Z Drain. The conveyance route runs close to the above sea level groundwater resource area enabling gravity flow from the wells to the below sea level Salton Sea.

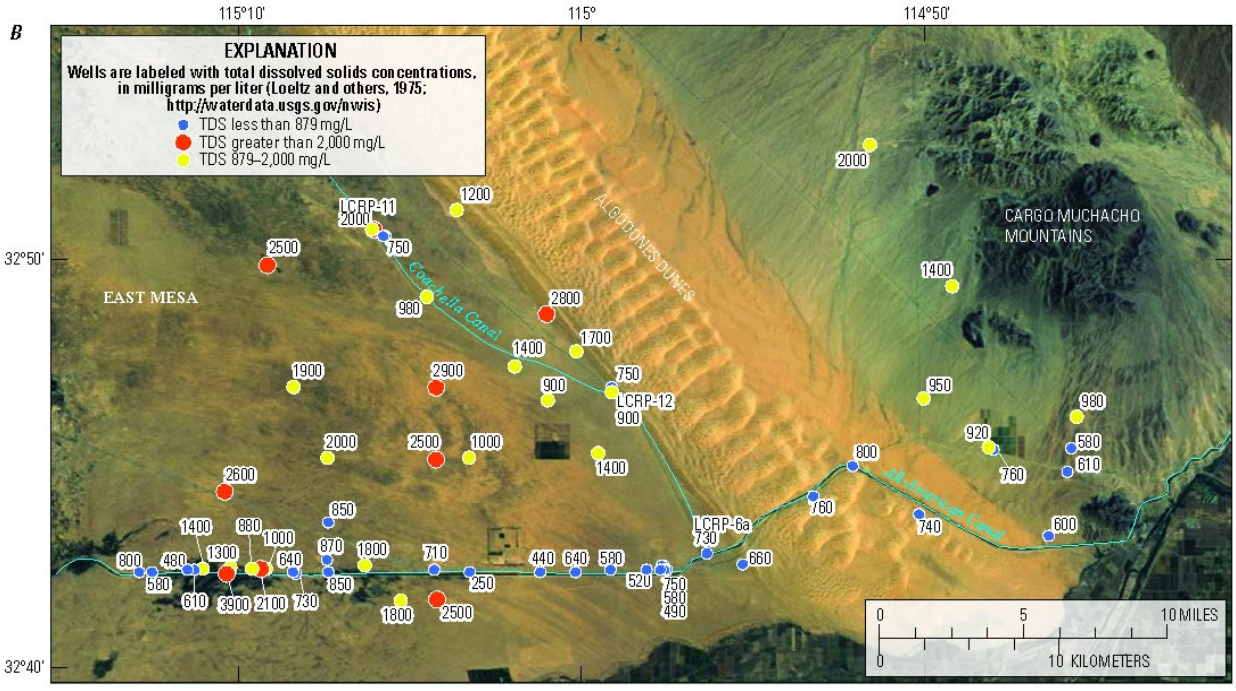
The East Mesa aquifer area is estimated to hold roughly one million acre feet of brackish groundwater [Reference 3]. Over fourteen million AF of brackish groundwater is in the Imperial Valley as a whole. Due to the predominantly brackish water quality, the Imperial Valley is defined by the State as a very low priority groundwater basin and thus exempt from State orders to limit groundwater extraction during recurring drought.

There are several existing brackish wells in the East Mesa and nearby areas in the Eastern Imperial Valley that could start supplying water to the Salton Sea in a short time on approval (see Map 2 from Reference 4). These wells were used for groundwater monitoring studies and are mostly available for use. The water quality in these wells is brackish and sourced from Colorado River seepage and local rainfall with TDS similar to water in the IID drain system (see Map 3 from Reference 4) and far less saline than the Salton Sea. Several of these wells have substantial documented flow rate capacity although not enough to fully offset the impacts of a 250 KAFY reduction of irrigation water. Additional well fields could be developed in the area.

Map 1. Groundwater Conveyance Route from East Mesa in the Imperial Valley to the Salton Sea



Map 2. Existing Brackish Wells in East Mesa and nearby Locations in the Imperial Valley



Map 3. TDS of Existing Brackish Wells in the Eastern Imperial Valley

Wellfield Costs	
Direct Capital Costs (adjusted to 2013)	
Source Water Development (2013)	$33,682,406
Working Capital (2 months of O&M costs)	$426,812
Direct Capital Costs (adjusted to 2011)	$34,109,218
Indirect Capital Costs	
Freight and Insurance, 5% of direct capital cost	$1,705,460.92
Owner's direct expense, 10% of direct capital cost	$3,410,921.83
Construction Overhead, 15% of direct capital cost	$5,116,382.75
Interest During Construction (1/2 of period 6% rate)	$1,023,276.55
Indirect Capital Costs	$11,256,042.04
Capital Cost	$45,365,260
Annual O&M costs Wellfield (2013)	$2,548,103
Annual O&M costs Drain Delivery (2013)	$12,768
Financial Analysis - cost per acre foot	
Equivalent Annual Cost (4% bond financed)	$5,174,490
Product Water, acre – feet	25,000
Equivalent annual cost per acre foot	$207

Table 1.Groundwater Make-up well field development costs

Cost estimates for new wellfield development are shown in Table 1 based on cost estimates in the 2009 IID Draft Integrated Regional Water Management Plan Appendix N pg. 26 for similar brackish water wellfield development in the same region.

A 50,000 AFY extraction rate will be sustainable in the long term, if needed, based on the limits to recharge of the aquifer by IID underruns estimated from historical data and by using the abandoned unlined section of the Coachella Canal as a recharge basin when underruns are available.

Water from More Flexible Storage

The Imperial Irrigation District (IID) has long sought to be given the right to store water in Lake Mead when IID's use in a year is less than their allocation, an underrun. Under current law and practice, any IID water allocation that is not used within the year goes to the Metropolitan Water District of Southern California (MWD) at zero cost. However water use within a year that exceeds the IID allocation must be paid back in future years. This does not incentivize conservation at below allocation water use levels in the IID service area. Granting IID the right to future use of allocated water not used in a given year would incentivize conservation at lower use levels and would help build elevation in Lake Mead at this critical time and going forward. MWD would lose an occasional windfall, but would not lose its normal allocation of Colorado River water.

Water from Reducing Evaporation Loss

The reservoirs on the Colorado River system are a very significant locus of water loss due to evaporation. For example Lake Mead is estimated to have lost on the order of 500 KAF to evaporation in the year 2020 (Reference 1, Page 22). One way to reduce evaporation loss that has been effective on smaller reservoirs around the world is to use floating covers on most or part of the water surface. Floating covers can reduce evaporation loss on reservoirs by 90% (Reference 2, Table 4). While Lake Mead, Lake Powell, Lake Havasu, etc. are extensively used for recreation, in a system shortage that threatens the operational integrity of the Colorado River system, there is good justification to reduce the area of recreational use to conserve water. For example, if recreational use of Lake Mead were limited to the most used 40% of the reservoir, and floating covers were employed on 60% of the surface area, then annual water savings would be on the order of 270 KAF, more than the 250 KAF annual reduction proposed for the Imperial Valley in California, without the substantial economic and environmental losses that would occur to the Imperial Valley and the Salton Sea. Based on Reference 2, Table 4, the cost would be ($0.30 / 1,000 L) / (0.0008107132 acre-feet / 1,000 L) = $370 per AF, which is well below the per acre foot amount proposed by the lower basin States under current negotiations to compensate for short term conservation now.

Water from the Ocean

Import of water from the ocean can provide a long-term solution to the public health and environmental damage from reduction of Colorado River supply to the Salton Sea basin. While opposed without analysis by State officials for decades, there are reasonable alternatives to increasing water supply to the Salton Sea region by importing ocean water from the Pacific or from the Sea of Cortez and managing the salt content. Several such proposals submitted to the State's Salton Sea Management Program are linked here:

https://www.ecomediacompass.org/long-term-restoration

The State paid $2.5 million to contractors to invent their own proposals in place of a genuine feasibility analysis of any of the proposals submitted, so independent feasibility analysis has not been done. If you wish to speak to any of these project proposers we will be happy to connect you.

Local Aquatic Restoration Projects

In order to further protect the avian and aquatic wildlife, the Pacific Flyway and the beneficial uses of the Salton Sea, we also recommend other nature-based solutions, such as utilizing the shoreline lagoons that already exist at the State Recreation Area and North Shore Yacht Club. The ponds have a sustainable year-round inflow and outflow of fresh or brackish water. By revitalizing the ponds, it amplifies their habitat value by creating a more usable and improved aquatic resource for fish and fish-eating birds. The total acreage may be small but the impact on saving wildlife, boosting tourism, drought resiliency, equitable outdoor access, recreation and economic benefits would be significant. We also recommend importing water from the ocean to provide the most effective long term dust mitigation measure, and provide options for habitat and human uses.

The Salton Sea, its communities, wildlife and ecosystem have been overlooked, neglected and abandoned in its time of need for too long. The crisis on the Colorado River is an opportunity for Federal, State and Local governments to address their responsibility to care for the environment. When the environment is healthy, our communities can thrive.

Thank you for this opportunity to comment on the post 2026 Colorado River Basin EIS.

Sincerely,
The EcoMedia Compass Board of Directors

References

1. "Implementation Effects of New Evaporation Coefficients for Lake Mead and Lake Mohave". U.S Bureau of Reclamation, Department of the Interior, February 2, 2022.

2. Xi Yao, Hong Zhang, Charles Lemckert, Adam Brook and Peter Schouten., 2010. "Evaporation Reduction by Suspended and Floating Covers: Overview, Modelling and Efficiency". Urban Water Security Research Alliance Technical Report No. 28

3. Thompson Andrew, Demir Zafer, Moran Jean, Mason Denise, Wagoner Jeff, Kollet Stefan, Mansoor Kayyum, McKereghan Peter, 2008, "Groundwater Availability Within the Salton Sea Basin, Final Report". Lawrence Livermore National Laboratory, LLNL-TR-400426.

4. Coes, A.L., Land, Michael, Densmore, J.N., Landrum, M.T., Beisner, K.R., Kennedy, J.R., Macy, J.P., and Tillman, F.D., 2015, "Initial characterization of the groundwater system near the Lower Colorado Water Supply Project, Imperial Valley, California": U.S. Geological Survey, Scientific Investigations Report Series 2015–5102, 59 p. http://dx.doi.org/10.3133/sir20155102

5. https://mywaterquality.ca.gov/eco_health/wetlands/extent/loss.html

6. https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health

7. https://www.ecomediacompass.org/education

Letter #: 12804

Date Received: 7/16/2023

Sender Names: 12527: Silviu Dorian Chelaru

Emails: 12527: dorian@transoceanic.us

Organizations: TRANSOCEANIC LLC

Subject:

Dear Bureau of Reclamation:

Let's think out of the box and get all the massive water that the Colorado River Basin needs. TRANSOCEANIC (transoceanic.us) massive water import systems are the only real solutions for ending our water scarcity FOREVER. (Innovation does move fast!)

TRANSOCEANIC can bring ten times more water than desalination, at 1/2 of the investment and 10 times lower acre-ft cost.

We propose to import Mexican Pacific river water in very large marine concrete vessels, share it with NW Mexico and the lower US Colorado River basin, and exchange and reallocate the water rights to the upper Colorado River users (see how below).

Arizona already has the funds to get a TRANSOCEANIC first article that can transport all the initial water promised by desalination, and California is an economic powerhouse that can easily develop and implement the TRANSOCEANIC concept. Other Colorado Basin states are also interested.

Please contact us so we can start the arrangements to solve our water problems; YES, FOREVER (with NO 100-YEAR PURCHASE COMMITMENT REQUIRED BY US).

See here how: https://lnkd.in/em7qbKGf

Sincerely,

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Letter #: 654

Date Received: 7/22/2023

Sender Names: 279: Flessa, Karl W - (kflessa)

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Organizations:

Subject: Post 2026 guidelines

Perhaps the EIS is just a narrow aspect of the post-2026 guidelines. If that is the case, please be sure to consider the environmental consequences to the Salton Sea. And ensure consideration of environmental flows to the Delta in the IBWC, post Minute 323 discussions. Environmental flows to the delta have been a great success. I know because Im the head o the binational science team that has been monitoring the effects.

But then again, perhaps the Bureau is looking for broader perspectives on post-2026 operating guidelines. Then I offer my comments below:

DOI and the Bureau should take a stronger role in forcing the Lower Basin states to confront the reality of climate change and the fact that there is too much demand for too little supply. The situation will not only not get better, one wet winter notwithstanding, it wont even reset to a more-or-less constant 'new normal. The rivers supply will continue to decline.

The first rule, then is to manage with the river to provide allocations based on proportions of the running average of previous five years reconstructed natural flows. Not fixed allocations based on a faulty, 100-year old estimate. Not shortages based on arbitrary levels in Lakes Mead and Powell.

A five-year running average provides some level of certainty and allows allocations to track what the river is doing. Longer than five years risks a bias toward higher volumes and more rapid depletions of reservoir storage. Shorter than five years risks sudden year-to-year changes in allocations.

Some future allocations must go to the reservoirs, even as the river continues its decline. Storage needs to be restored. The first years of any 'surplus must all go to the reservoirs.

No effective priority to the Lower Basin; no priority to California within the Lower Basin.

OK, supposing we cant avoid the holy scripture of the original fixed allocations. Then accomplish this task via shortage criteria, with shortages determined by how much the average of the past five years of flow are below the Compacts allocations. Then assign shortages in proportion, across the board. No priorities. Allow interstate water marketing of a small portion of the total allocation. See if it works.

The Lower Basin states have demonstrated themselves to be incapable of keeping up with - much less anticipating- changes in the river and changes in demand. We should not expect them to steer us out of the ditch they have driven us into. We cant expect that states trying to maximize their allocations to come up with a solution that will adequately reduce the total.

We need a modified governance structure: A Lower Colorado River Basin Commission, with broad representation and strong federal guidance and technical participation. The current 'system of deals struck in airport lounges, conference calls and CRWUA hallways is about as far from transparent as one can get. The current ad hoc system just seems to be a way to continue business as usual and to avoid open meetings laws.

I applaud the Bureaus efforts to open-up the process. I applaud the commitment to engagement with the tribes. Thank you.

Im also glad to see an intention to continue to engage with Mexico on managing the river. Minute 323 has been a success including the engagement with NGOs and allocations for environmental purposes. Heres hoping that IBWC can follow the Bureaus lead in broadening participation in decision-making.

Thanks,

Karl Flessa

Karl W. Flessa

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Sent via email to crbpost2026@usbr.gov
August 14, 2023

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Attn: Post-2026 (Mail Stop 84-55000)
P.O. Box 25006
Denver, CO 80225

RE: Comments on Development of Post-2026 Colorado River Operational Strategies

Dear Ms. Erath,

Thank you for the opportunity to submit scoping comments regarding the operation of the Colorado River System post-2026 (Post-2026 Guidelines, hereinafter). While we recognize that effective long-term management of the Colorado River will require action from states and Congress, in addition to action by the Bureau of Reclamation, we focus our comments on items within the purview of Reclamation. We will begin by discussing the specific operational guidelines for the Colorado River System (System, hereinafter). Then, we suggest broader strategies for managing the System. Finally, we address other relevant issues within Reclamation's control, including ecological factors and tribal inclusion and equity.

Specific Operational Guidelines

As noted in the Notice of Intent, "[o]ver the past 15 years since the adoption of the 2007 Interim Guidelines, as drought and low-runoff conditions continued, additional responsive actions were needed to complement the 2007 Interim Guidelines" 88 FR 39455, 39455. In other words, the Interim Guidelines were insufficient to protect the System under the conditions experienced in the last twenty years. To prevent this from occurring in the future, we propose that Reclamation establish "guard rails", that is, operational restrictions that constrain future functional use of the System as well as future negotiations such that it would be impossible to return to the position the System faced in Water Year 2022 (WY 22).

Furthermore, the 2007 Interim Guidelines failed to consider a sufficiently wide range of hydrological possibilities, to the detriment of the System. In WY 22, Reclamation was forced to reduce Glen Canyon Dam releases to 7.0 maf—480,000 acre feet less than what was dictated by

the 2007 Guidelines, but necessary to minimize the risk of damage to Glen Canyon Dam should Lake Powell drop below minimum power pool elevation. The Post-2026 Guidelines must provide management parameters for all possible hydrological outcomes, including those which may be highly unlikely according to existing models.

Finally, establishment of broad environmental goals for the System should be a component of the Post-2026 Guidelines. Although Reclamation recognized the potential for some environmental impacts in the EIS for the 2007 Guidelines, subsequent analysis and monitoring demonstrates that certain significant impacts were inadequately evaluated at that time. We posit four major types of environmental considerations for the System post-2026; sediment management, nonnative fish, ongoing recreational value of Glen Canyon, and the Colorado River Delta.

Broad Strategies for Managing the System

To guide this post-2026 process and continue acting as a leader in Colorado River matters, Reclamation must act to restore public confidence in the Bureau's ability to both manage and measure the System. The parameters used to determine operations, including evaporation, consumptive use, and Lower Basin tributary usage must be accurate and transparent, using agreed-upon data sets. Consumptive use associated with agricultural irrigation is estimated imprecisely. Similarly, in the Upper Basin, consumptive use has been estimated based on broad parameters of acreage irrigated, climate variables, and general county-wide crop mix factors, using decades-old equations and coefficients. The inconsistencies must be remedied to maximize the utility of the 12.6 maf/yr System water. This transparency must extend to seepage around Glen Canyon Dam that produces inflows between the Dam and the Lees Ferry gage, inflows in the Grand Canyon between the Lees Ferry gage and Lake Mead, evaporation from reservoirs, and the effect of depletions in Lower Basin tributaries, including the Gila River, Virgin River, Muddy River, and other tributaries. To have an adequately managed system, it will be essential for the states, Tribes, major water users, and Reclamation to collectively endorse an appropriate methodology, resulting in an agreed-upon data set.

It is widely understood that the System suffers from significant evaporative losses. In an annual water year, in which 12.6 maf/yr move through the system, losing nearly 20% of that flow to evaporative losses is simply untenable. Future reservoir operations should also seriously evaluate how to reduce evaporative losses that are approximately 2 maf/yr across the System. Currently there are differences between how evaporation is reported between the Upper Basin and Lower Basin reservoirs, and updated evaporation studies are either in progress or have been completed, but the results and data have not yet been made public and to our knowledge are not yet being used. We ask Reclamation to be more transparent and consistent with how evaporation is measured, reported, and used in the Consumptive Uses and Losses Reports, decree accounting reports, and system models—24-month study, the Colorado River Simulation System (CRSS), and the Mid-Term Operations Probabilistic Model (MTOM).

Given our knowledge of evaporative losses, it is imperative to analyze the differences in evaporative losses depending on the location of reservoir storage. These analyses should consider the losses associated with storing all System water in Lake Mead versus Lake Powell. It is also necessary to seriously consider the operation of Lakes Powell and Mead as a single reservoir. In the Post-2026 Guideline process, Reclamation has an opportunity to envision these possibilities as alternatives, with the goal of ensuring that the Post-2026 Guidelines represent the best possible water savings for all users in the Colorado River Basin while also maximizing

environmental benefits and minimizing environmental harms as water is moved through the Grand Canyon reach.

Conservation incentives in the Post-2026 Guidelines must actually promote conservation. The Post-2026 Guidelines should incentivize cooperative conservation projects in the Upper Basin that are separate from any mandatory reductions, through provisions that resemble ICS and are designed specifically for the Upper Basin. An example of such an incentive would be to give individual Upper Division States the opportunity to bank conserved consumptive uses in system storage (all CRSP reservoirs and Lake Mead), then make the water available for either future compact compliance. But in its analysis of these conservation measures, the NEPA analysis must clearly consider the beneficial roles of non-consumptive uses that have historically fallen outside of traditional legal and accounting systems, such as environmental uses, unquantified tribal water rights and non-consumptive uses, and groundwater, such that "conservation" does not come at the expense of unmeasured but valuable roles water plays in the Colorado River Basin.

Other post-2026 issues within Reclamation's control

Climate change science indicates that future hydrological outcomes are more and more difficult to predict. Furthermore, current models show that the 12.6 maf/yr flowing through the System is not the result of a drought but rather the norm going forward. For this reason, we highly suggest shifting language in the Post-2026 Guidelines from using the word "drought" to using the word "aridification", which better reflects the current hydrological reality. Rather than treating the low annual System flows as an anomaly that will end in the future, it should be understood as a continuing (and potentially worsening) consequence of climate change. Consequently, the Post-2026 Guidelines must include flexibility and specific procedures to deal with even more severe challenges if the policies to reduce use and losses prove insufficient.

Demand for water within the System dramatically outpaces supply—there can be no meaningful operational change without a clear approach for reducing demand to meet supply. Leaving the mechanisms for reducing demand up to states has historically been ineffective, as evidenced by the fact that consumptive uses and losses have changed relatively little during the past 40 years. Total basin-wide consumptive uses and losses averaged 14.2 maf/yr between 2003 and 2020 after California reduced its consumptive use from 5.4 maf (2002) to 4.4 maf (2003). While compelling all states within the System to use less water is beyond the purview of Reclamation, the Bureau does have the capacity to create operational criteria to which all states can agree. The Post-2026 Guidelines should address the reality that the annual System flow of 12.6 maf/yr will not support ongoing annual consumptive uses of 14.2 maf/yr.

Reclamation must consider tribal interests in the Post-2026 Guidelines. An appropriate balance of water supplies and uses cannot ignore either adjudicated or unadjudicated Tribal water rights. Only Tribal leaders and spokespersons can appropriately convey their interests and desires for the Post-2026 Guidelines, and we do not purport to speak for any Tribe. We suggest, however, that impacts on all Tribal water rights, including those not yet quantified and those not yet put to use, must clearly be considered in the examination of any proposed Post-2026 Guidelines. The possible settlement or other quantification of currently unresolved Tribal water rights should be included in all models for proposed alternatives in Post-2026 Guidelines so that it is clear to decision makers the implications for all basin water users when those legal and moral entitlements are met.

Finally, we strongly suggest that the new EIS be prepared by an integrated team that accesses federal and state (and perhaps university) scientific and operational expertise such that the best available science is used to evaluate alternative reservoir operations policy. Relevant expertise can be found in the state administrative agencies, GCMRC, the staff of the Upper Colorado and San Juan endangered species recovery programs and the Lower Basin MSCP, and the faculty and research staffs of some universities. Similarly, analytical support will be needed to evaluate the impacts of reservoir operations on hydropower generation and system-wide water resource operations. Preparation of this EIS cannot be merely delegated to a private contractor with the assumption that the contractor will have the capacity to analyze all relevant scientific and engineering issues.

Thank you so much for the opportunity to comment on the Post-2026 Guideline process. We look forward to future discussions.

Sincerely,

Katherine H. Tara

Katherine H. Tara

John Fleck

John Fleck

Western Resource Advocates

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August 15, 2023

The Honorable Camille Touton
Commissioner
U.S. Bureau of Reclamation
1849 C Street, NW
Washington, D.C. 20240

Sent via Electronic Mail: **crbpost2026@usbr.gov**

Re: Western Resource Advocates' Response to the Bureau of Reclamation's "Notice of Intent to Prepare an Environmental Impact Statement and Notice to Solicit Comments and Hold Public Scoping Meetings on the Development of Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead"

Dear Commissioner Touton:

Western Resource Advocates (WRA) hereby submits this comment letter in response to Reclamation's "Notice of Intent to Prepare an Environmental Impact Statement and Notice to Solicit Comments and Hold Public Scoping Meetings on the Development of Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead" (Notice of Intent or NOI) as published in Federal Register Notice – 88 FR 39455 on June 16, 2023. WRA has been a long-time advocate for common sense solutions that will keep the Colorado River flowing, protect key species and values of the natural environment and human communities, and improve resilience to climate change to better manage any future water shortages. Accordingly, WRA would like to thank the Bureau of Reclamation (Reclamation) for issuing this Notice of Intent and request for public comment as part of the process to develop and assess future solutions on such an important, timely, and serious set of issues.

At the outset, we would like to acknowledge that the past few years have been unprecedented with regard to facing the impacts of the fundamental imbalance between supply and demand on the Colorado River system. This imbalance has made it extremely challenging to focus on long-term Colorado River management, with so many short-term pressures on the river. We would like to commend the staff of the Bureau of Reclamation and partner agencies for their tenacity, creativity, and long hours of work seeking to avert a deeper crisis on the river, efforts which have been a model of exemplary public service. The efforts and contributions of the basin states, Tribes, and stakeholders on the Colorado River have been vital and appreciated as well. We are grateful that the long-term public input process is commencing and believe that there are valuable lessons to be learned from the recent short-term actions that can inform the scope of the long-term approach.

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WRA appreciates that the Notice of Intent appropriately conveyed the sense of urgency and scale of the problems impacting the Colorado River Basin (Basin). As a Basin, collectively, we have increasingly known for decades that the system is facing a fundamental supply and demand imbalance which will require significant action to rectify, especially as climate change continues to negatively impact water supplies throughout the Basin. As observed in the Notice of Intent, and as experience has shown, previous long-term decision-making did not include an adequate range of hydrologic scenarios or solicit adequate participation from basin stakeholders, resulting in the need for additional interim actions and emergency operations well before expiration of the 2007 Interim Guidelines. The Notice of Intent further acknowledges that there have been significant changes since those 2007 Interim Guidelines were developed, and that circumstances will continue to change pre- and post-2026, which makes this an opportune time to take actions and pursue strategies that are both decisive and flexible as needed.

Recent efforts to date, including the Supplemental EIS process, have only focused on limited sections of the 2007 Interim Guidelines rather than the Guidelines as a whole. Recognizing the shortcomings in previous decision-making processes and continued hydrologic challenges, we are pleased that the Notice of Intent rightfully acknowledges that post-2026 guidelines will need to revisit "all sections of the 2007 Interim Guidelines and other operating agreements that expire in 2026 (e.g., the DCP)" to develop guidelines and strategies that "are sufficiently robust and adaptive and can withstand a broad range of future conditions thereby providing greater operational and planning stability to water users and the public throughout the Colorado River Basin." Similarly, it is appropriate for Reclamation, through the Notice of Intent, to seek more broadly "comments concerning the scope of specific operational guidelines, strategies, and any other issues that should be considered."

The Notice of Intent highlights specific themes identified by stakeholders and partners during the pre-scoping process last year, which include the need for future guidelines and strategies to be "proactive," "avoid continuously managing in response to crises," be "capable of withstanding a broad range of future hydrologic and operating conditions," and take a more "holistic approach to Colorado River water management in a way that focuses on the long-term sustainability of both the Basin's population and natural environment, minimizes system vulnerability, and increases system resiliency." These themes identified in the Notice of Intent are essential high-level goals for developing post-2026 guidelines and strategies, and we are encouraged that Reclamation has stated them. Beyond this, as part of its intended holistic approach, we strongly urge Reclamation to consider certain baseline principles that the post-2026 process should embrace. Specifically, guidelines and strategies developed in this process should consider how they satisfy each of the following **core principles**:

1. We must use less water from the Colorado River. Cities, farms, ranches, and businesses must take steps to cut water consumption by at least 25%, and we should take new, non-Tribal water development (activities that take more water out of rivers) off the table until a sustainable path has been identified. Everyone has a role in resolving our over-dependence on the River.

2. Basin policies must reflect the fact that there is less water in the river today, and there will be less water in the river in the future due to a warming, drying climate. These policies must be flexible and proactive, and equitable and sustainable for all states, sovereigns, and stakeholders.

3. Healthy river flows must be maintained to support irreplaceable wildlife habitat, environmental resources, and recreational uses along the Colorado River and its tributaries.

4. The 30 federally recognized Basin Tribes, many whose water rights, infrastructure needs and values have been long denied, must be included in the decision-making process and have equitable access to clean drinking water.

5. Decision-making forums should be meaningfully inclusive and enable input from a broad range of impacted people, parties, and stakeholders.

In addition to these high-level principles that we urge Reclamation to include throughout the post-2026 process, WRA is pleased to provide the following specific comments to be considered as Reclamation develops the proposed federal action, Purpose and Need, and scope of the analysis (e.g., affected area, geographic scope, time horizon/term).

We strongly believe that for Reclamation to achieve its stated goals with post-2026 guidelines and strategies, these next steps in the EIS process must be broad, inclusive, and move well beyond operations at Lake Powell and Lake Mead, to include reservoir management in the Upper Colorado River basin and federal and other programs across the entire basin that affect river resources and contribute to more flexible river management. To truly bring the system back into balance, we must establish a more resilient and proactive system of governance that fully respects and meets the needs of all sovereigns, states, and sectors, including the environmental needs of the river and its tributaries throughout the Basin.

WRA's comments are based on the fundamental point that there is a need for action driven in large part by climate change. What might have been seen as working at the time the 2007 guidelines were formulated is no longer appropriate given the passage of time and experience. Accordingly, while the NOI references four elements of the 2007 guidelines, we favor a rethinking of existing concepts and inclusion of new paradigms and strategies in development of the revised guidelines. In this spirit, WRA offers comments below concerning the Notice of Intent's recognition of the determinations Reclamation will be making, including the agency's "decision on the proposed federal action, Purpose and Need, and scope of the analysis (e.g., affected area, geographic scope, time horizon/term)."

With respect to Purpose and Need, WRA believes that the purpose and need for the federal action need to start from the experience-based outcome to date that the framework of the existing guidelines has proven to be inadequate to deal with climate change, declining and less predictable hydrology, and overuse of water given the actual supply over time. A "need" is for a Colorado River system that is less reactionary, more proactive and adaptive, and focused on resilience, which is the capacity to withstand or recover quickly from difficult and changing circumstances. A guiding "purpose" of the action and EIS analysis should be to operate and manage the Colorado River system holistically, not only for the important consumptive uses made in the Basin states, but also to maintain the integrity of the river itself and all of its resources.

Accordingly, the Purpose and Need for the action could conceptually include, or even be stated as:

> "the development of guidelines for operation and management of federal water storage and distribution facilities, including but not limited to Glen Canyon Dam and Hoover Dam, as well as other federal activities within the greater Colorado River Basin, that holistically take account of and broadly seek to achieve the multiple benefits associated with consumptive water uses, non-consumptive water uses, and environmental needs and requirements related to the Colorado River."

Regarding the proposed federal action, this should be the action or actions that best achieve the broad and holistic purpose and need identified above. It should not simply be starting with existing guidelines that have been proven to be inadequate and, modifying them slightly, hoping for a better result. Therefore, while Reclamation can consider modification of the existing guidelines based on what has worked and hasn't since 2007, it should also think broadly about potential new paradigms or approaches to resolving new problems, including addressing the principles noted above.

Finally, with respect to the scope of analysis, Reclamation identifies three elements in the Notice of Intent. WRA maintains that the affected area should be the entire Colorado River Basin, including the mainstem and tributaries, and not just the areas directly affected by operation of Lake Powell and Lake Mead. Also broadly, the geographic scope should extend the entire length of the Basin, including all seven Basin states and Mexico. A reasonable time horizon or term may be 20 years like the 2007 Guidelines expiring in 2026, but with structure built in to adaptively manage, rethink, and adjust the new guidelines as needed during the new defined interim period.

With this general introductory framework described above, WRA proceeds below with concepts and specific ideas that it maintains should be discussed and considered during the NEPA process, under a broad interpretation of Purpose and Need, proposed federal action, and scope of analysis.

a. Shortage determination based both on reservoir elevations and recent hydrology

Using only reservoir elevation levels to determine operational and shortage tiers has proven to be sluggish and imprecise in responding to rapidly declining hydrology. One way to improve system management is to include recent hydrology into operational and shortage decision-making. WRA recently commissioned an analysis which showed that if we match Lower Basin shortages to both reservoir levels *and* recent hydrologic conditions (e.g., 5-year running average of inflows into Lake Powell), and have sustainable levels of use in the Upper Basin, we can end or reverse the decline of Lake Powell and Lake Mead and re-establish a balance between supply and demand. This approach would significantly decrease the risks of Powell and Mead falling to critical levels. In the absence of considering recent hydrology, or perhaps even in addition if it is taken into account, Lower Basin shortages could be more extensive and "earlier on" in the process, such that the shortages required to keep the system in balance are not happening only once the system is on the precipice of crashing, as in recent years.

By contrast, an approach of focusing solely on reservoir elevation levels does not provide any guidance for system recovery. We suggest Reclamation include reservoir recovery criteria in the post-2026 guidelines. The post-2026 guidelines need to adequately respond to the river's changing hydrology, so that the Basin can begin to manage demands and ecological needs within the true amount of water that the river provides.

b. Adequate consideration of climate realities for operational certainty

One of the primary goals of the 2007 Interim Guidelines was to provide operational certainty for the Basin states. But because the operational guidelines did not include a robust range of climate change and hydrological scenarios, the system almost crashed before the guidelines expire. The post-2026 guidelines need to provide operational certainty around all future scenarios so that the same mistake is not repeated. This includes operational certainty when the river's annual supply is as low as 11, 10, or even 9-million-acre feet (MAF).

Reclamation's modeling efforts should be guided by relying on drier — and more reflective of recent hydrology — climate model runs. Additionally, drier hydrologies that are also plausible, for example, include millennium drought (2000-2020) and shorter time periods of significantly drier years (e.g., 2000-2004, 2020-2022). As was discussed on a recent Integrated Technical Education Workgroup meeting, Reclamation is moving in this direction with its DMDU (Decision-making Under Deep Uncertainty) and MORDM (Many Objective Robust Decision Making) approaches for analyzing multiple policy and hydrological scenarios. This will help considerably in understanding the ability for any post-2026 guidelines or strategies to "live within an 11 MAF river." Furthermore, a recognition of these potential drier hydrologies means not just considering what those lower flows mean in terms of reduced supply, but also how those hydrologies impact the overall environmental health of the river and the sustainability of the system.

c. Combined storage management

Coordinating Lake Powell and Lake Mead operations in the 2007 Interim Guidelines was a good step, but falls well short of actually managing the river in a proactive, flexible, and resilient way. Because there are no diversions or human consumptive uses between the reservoirs, Reclamation has the flexibility to manage them as one storage bucket. Further, Reclamation could consider total system storage that incorporates the Upper Basin CRSP units when determining operations. Looking at the Basin as a whole provides Reclamation more flexibility in how and where it keeps water. Importantly for the river itself, if Reclamation manages the reservoirs, including Powell and Mead, holistically in this integrated fashion, it is better able to operate them for the benefit of key environmental resources, such as the Grand Canyon.

d. Expanding the role of reservoir storage and releases for multiple benefits in the Basin

Currently the operating guidelines focus on deliveries of water from Lake Mead, from the tiered operations in shortage guidelines to balancing tiers from upstream. We need to expand the role of storage beyond just delivering water to consumptive users, to assess how that storage can be used for system resiliency. A resilient system does not just deliver water—a resilient system manages the entire system, across the entire basin, focusing on multiple values, including environmental, recreational, and cultural. A resilient system focuses on system integrity as a top priority, as opposed to mechanical water deliveries.

The implementation of Drought Operations in 2022 provided a great example of a more flexible approach to addressing system resiliency through creative use of reservoir storage and delivery. Releasing additional water from Flaming Gorge Reservoir in 2022 helped support critical reservoir levels at Lake Powell but ***also was timed in a way*** to benefit endangered fish, river recreation, and hydropower at Flaming Gorge dam. These types of creative solutions should inform the approach for management post-2026. Drought Operations in 2022 also served as an example of good outreach by BOR to stakeholders, in advance of the action, to allow input to refine the approach. Another example of a flexible and holistic approach achieving multiple benefits is the High Flow Experiment through the Grand Canyon conducted in Spring 2023. Water was transported from Lake Powell to Lake Mead with timing and a flow rate that achieved multiple benefits for sediment transport, beach building, and native fish in the Canyon – all while generating hydropower at Glen Canyon Dam and delivering water to Lake Mead

e. Moving away from a strict tiered approach to operations

The current tiered approach to reservoir operation releases and accounting for associated Lower Basin shortages is not only less responsive to climate change impacts but can actually dis-incentivize the basin states from making good faith efforts to support overall system storage. The current tiered system enables potential strategies by Lower Basin states to take certain actions to keep them in specific tiers, as opposed to taking certain actions to benefit the entire system. In the Upper Basin, there really is not an incentive to conserve water for Lake Powell unless that would bump operations into a different tier. For overall system resiliency, we need to move towards a more continuous or curved management scheme that is explicit in how every action benefits the entire system or not.

Reclamation has discussed how it will use a Decision-making Under Deep Uncertainty (DMDU) approach to evaluating potential alternatives. One of the key components of DMDU is assessing the vulnerability of a policy, that is, thinking through what would cause it to fail. A more "curved" approach to reservoir operations, as opposed to rigid tiers, is less vulnerable to manipulating the system and incentivizes all users to do what is best for the system overall. In doing so, it is much less likely to fail.

f. Adapting long-term consumptive use and losses to available supplies

One of the most fundamental components of the post-2026 guidelines will be ensuring that demands throughout the Basin do not exceed available supplies, and that demands will continue to be reduced as flows on the river decline, as is expected. Bringing the system back into balance will require shared shortages across the Basin. Everyone across the basin, and across all sectors of consumptive use, has a role to play.
In the Lower Basin, this adaptation will require increased shortage requirements to Arizona, Nevada, California, and Mexico. Reclamation must also account for evaporative and system losses in the Lower Basin, providing equity to the Upper Basin which is charged evaporative losses at CRSP units. This measure alone could reduce uses in the Lower Basin by approximately 0.8-1.2 MAF.

In the Upper Basin, uses also will decline should flows continue to decline, and Reclamation should factor into its management alternatives incentivizing decreasing uses in those states to 4, 3.5, or 3 MAF through programs that compensate water users to reduce consumptive use and incentivize keeping those savings in Colorado River tributaries in amounts and at times of the year when they support public resources like recreation and the environment. The Demand Management Storage Agreement could serve as a platform for this work but has not, thus far, been embraced by all Upper Basin states. Regardless, IG 2.0 management alternatives should include the reasonably foreseeable continuation of federal funding to support incentivized demand reduction programs.

g. Supporting Tribal inclusiveness, water needs, and stewardship of Basin resources

WRA strongly supports Reclamation taking full account of the needs, concerns, and priorities of the Colorado River basin Tribes in revising the 2007 Guidelines and taking other appropriate actions. While the Tribes are undoubtedly the best spokespeople for articulating their specific needs, WRA urges Reclamation to consider several points in formulating its NEPA scope of analysis and process framework. First, it is essential that Tribes be involved in the process of developing workable solutions, and historical Tribal exclusion should be remedied in the post-2026 Interim Guideline process by enabling Tribes to have a seat at the table. Reclamation should

be commended for recognizing the importance of active and meaningful involvement by sovereign tribes in the Basin. WRA is hopeful that a process will be determined for robust Tribal participation.
Substantively, WRA shares an interest with the Basin Tribes to protect, improve or enhance river assets, including through the Lower Basin Multi-Species Conservation Program and Glen Canyon Dam Long-Term Experimental Management Program. We further agree that a guiding concept should be the overall integrity of the Colorado River and its tributaries, recognizing the need for stewardship of the Basin's ecological, spiritual, and/or cultural resources, while providing water for Tribal Nations and other human and natural uses. Beyond these highlighted points, WRA joins in those made in the letters from the Conservation Groups and the Upper Basin Dialogue Participants.

h. Expanding the scope of the post-2026 guidelines and strategies, and overall system benefits, through a holistic approach

One of the key themes Reclamation identified in the Pre-Scoping Process is that "future operational guidelines and strategies should incorporate a more holistic approach to Colorado River water management in a way that focuses on the long-term sustainability of both the Basin's population and natural environment, minimizes system vulnerability, and increases system resiliency." We support this goal for Reclamation and believe the post-2026 guidelines and strategies need to be developed with a geographic scope from the Upper Basin CRSP reservoirs down through the Mexican Delta. If we have learned anything since the 2007 Guidelines were developed, it is that the Basin is connected throughout, and true system resiliency depends on management and policy decisions throughout. DROA operations considering fish needs, and releases into the Grand Canyon considering ecological needs there, are good examples of this.

If the scope of its analyses were holistic, Reclamation could consider where and how it manages all the storage accounts. Reclamation should embrace detailed operational rules for Lake Powell and Lake Mead, but also consider other reservoirs in the system. If storage accounts are not limited to Lake Mead, for example, then where they are "stored" could have positive implications for environmental resources. Similar to the combined storage management idea above, if Reclamation started to think more holistically regarding where and how it stores water, not only could it satisfy compact delivery requirements, but it could benefit key reaches of the river along the way. NEPA analysis for the post-2026 guidelines could even look at the impacts of identifying or mandating a certain acre-foot amount for release from Glen Canyon Dam and/or Hoover Dam every year for environmental purposes downstream in the US and Mexico.

Overall, Reclamation should be creative in considering how to use and account for storage over the Colorado River system, doing so in a way that holistically achieves multiple benefits while meeting the needs of different water users. Whatever the scope of individual operational rules, the scope of the overall impacts analysis should be broad. Reclamation can further advance a holistic approach protecting important environmental attributes in the Basin through considering mitigation of impacts from operations and strategies to protect and maintain the numerous diverse benefits provided by the Colorado River, its facilities, and its natural resources.

i. Connection and consideration of related parallel processes

WRA also believes that Reclamation should connect the development of post-2026 operations to parallel planning processes, so that they are taken into account within the scope of the NEPA process. Several current multi-state agreements are set to expire at the end of 2025 while others are ongoing and require a resolution sooner rather than later. Their re-issuance/resolution will be critical to the "package" of management

strategies for the Colorado River and thus they should be clearly connected to the post-2026 operations and associated NEPA analysis. In this regard, Reclamation should consider:

(1) Any programs developed/implemented to address "critical levels" at Powell and Mead. Drought Operations and timing such releases to benefit streams.
(2) Progress towards a robust demand management program in the Upper Basin, including the Demand Management Storage Agreement, with consideration of how that program may be designed to benefit environmental flows in the Upper Basin.
(3) Continued progress towards providing all tribes with clean water.
(4) Continued progress with Mexico on Minutes to the 1944 Water Treaty and mitigating ecological impacts in the Colorado River Delta.
(5) Progress towards efforts to address declining Salton Sea levels.
(6) Continued coordination with relevant federal agencies to identify how post-2026 guidelines and any associated operations (both long-term and short-term/emergency) can be designed to benefit Upper Basin and Lower Basin environmental and recreational resources.

WRA appreciates Reclamation's consideration of these comments on the Notice of Intent. These are important issues, and conservation groups should be included in the process as they have much to contribute to a comprehensive, holistic approach to managing the vital resources of the Colorado River Basin to meet short-term needs and ensure long-term sustainability. We look forward to working with Reclamation and all other interests in the Colorado River Basin as the post-2026 Interim Guideline revision process moves ahead.

Attached is a list of 357 individuals who support for WRA's five core principles (see page 2-3, above) as evidenced by signing a Hand Raise petition. We also note that several members of the outdoor industry support our core principles and have commented to the Bureau of Reclamation directly.

Sincerely,

Bart Miller
Healthy Rivers Program Director
Western Resource Advocates

Attachment

Signatures in support of WRA's five core principles

357 people have signed on in support of WRA's five principles for governing the Colorado River.

WRA principles for governing the Colorado River:

1. Reduce water use across the Basin by 25%.
2. Use the best available science and plan for there being less water in the river today and less water in the future due to a warming, drying climate.
3. Protect and improve water flows in the river to protect irreplaceable ecosystems, cultural values, and outdoor recreation opportunities.
4. Include Colorado River Basin Tribes, who have long been denied access to their fair share of water, in decision-making and ensure that they have equitable access to water.
5. Provide impacted people, conservation groups, and other stakeholders the opportunity to meaningfully contribute ideas for sustaining the river.

Signatures in support of WRA principles for governing the Colorado River:

No.	Signatory Name	Home State	Home Zip Code
1	Lee, Jerry	AL	35404
2	Ayers, Bob	AZ	85658
3	Babb, Heather	AZ	85382
4	Bacon, Bren	AZ	85533
5	Batway, Jewell	AZ	85120
6	Busch, Sean	AZ	85204
7	Chavez, Salissa	AZ	85140
8	Cole, Tracy	AZ	85302
9	Crane, Marcella	AZ	85053
10	Cuddeback, Maryann	AZ	85711
11	Donovan, Stephan	AZ	85737
12	Duran, Janice	AZ	85614
13	Eames, Cheryl	AZ	85373
14	Edwards, Monique	AZ	85716
15	Evans, Nick	AZ	85143
16	Fennell, April	AZ	85250
17	Finley, Diane	AZ	86336
18	Fisher, Ruth	AZ	85051
19	Fitzpatrick, Linda	AZ	85209
20	Freeman, Gregory	AZ	85625
21	Giacchino, Sylvan	AZ	86001
22	Girtz, CD	AZ	85338
23	Goetinck, Glenys	AZ	85746
24	Goldsmith, Melody	AZ	86429
25	Goodwin, Shaun	AZ	86406
26	Grieves, Kathy	AZ	85383

No.	Signatory Name	Home State	Home Zip Code
27	Hanson, Barbara	AZ	85748
28	Hartgraves, Paula	AZ	85750
29	Heffernan, Dan	AZ	85304
30	Henriksen, James	AZ	86314
31	Hicks, Cynthia	AZ	85015
32	Hodges, Sherri	AZ	85051
33	Horton, Dan	AZ	85750-0839
34	Horton, Deanna	AZ	85750
35	House, Donna	AZ	86515
36	Hughes, Sandra	AZ	85373
37	Iams, Vonnie	AZ	85086
38	Kent, Diane	AZ	85255
39	Krasnow, D	AZ	85258
40	Kravcov Malcolm, Karen	AZ	85262
41	Kristal, Theresa	AZ	85020
42	LaSchiava, Dona	AZ	85614
43	Lee, Michael	AZ	85383
44	Lyman, Teresa	AZ	85396
45	Malven, Tania J.	AZ	85719
46	Maynard, Lanna	AZ	85715
47	McVie, Christina	AZ	85742
48	Metcalf, Patricia	AZ	85208
49	Murphy, Dacia	AZ	85213
50	Nagel, Dennis	AZ	85719
51	Nelson, David	AZ	85715
52	O'Rourke, Melissa	AZ	85225
53	Phelps, Sally	AZ	85711
54	Pincombe, Roxanne	AZ	85122
55	Pinkus, Walter	AZ	85206
56	RAYMOND, HBRUCE	AZ	85745
57	Ritter, Philip	AZ	85388
58	Rodriguez, Simon	AZ	85747
59	Saber, DeeAnn	AZ	85719
60	Sampson, William	AZ	86315
61	Shores, Kathy	AZ	85281
62	Short, Kimberly	AZ	85248
63	Soletzky, Robin	AZ	85053
64	Stark, Louise	AZ	85007
65	Vana, Cheryl	AZ	85194
66	Waltasti, Marilyn	AZ	85138
67	Weinflash, Laura	AZ	85259
68	Weinflash, Scott	AZ	85259
69	Werda, Steve	AZ	85719
70	Wick, Jodi	AZ	85022
71	Williams, Catherine	AZ	85719

No.	Signatory Name	Home State	Home Zip Code
72	Wood, Barb	AZ	86305
73	Woods, Dana	AZ	85022
74	Wynne, Judson	AZ	86005
75	Angell, JL	CA	95672
76	Brisby, Susan	CA	93536
77	Corry, Ronit	CA	93101
78	De Shann, Barbara	CA	92675
79	Heck, Nancy	CA	93454
80	Hughes, Tom	CA	91767
81	JORDAN, SUSAN	CA	92007
82	Stein, Cindy	CA	91320
83	Abrams, Ericka	CO	80015
84	Acosta, Carlos	CO	81632
85	Arnold, Tom	CO	80004
86	Ash, Tiffany	CO	80228
87	Atchison, Katherine	CO	80528
88	Avery, Diana	CO	80905
89	Bishop, Roberta	CO	80011
90	Blaine, Kelley	CO	80220
91	Bland, Shauwn	CO	80908
92	Boling, Kathryn	CO	80110
93	Borrelli, Silvana	CO	80113
94	Bronson, Jonette	CO	81435
95	Brown, Deidre and Ronald	CO	80501
96	Budoff, Roslynn	CO	80004
97	Cabell, John	CO	80206
98	Catlett, Morganna	CO	80304
99	Chaffee, Lacey	CO	80526
100	Chase, Linda	CO	80246
101	Christian, Kathryn	CO	81501
102	Colatosti, Ryan	CO	80127
103	Coogan, Joyce	CO	80128
104	COOK, CATHERINE	CO	80231
105	Cooke, Jerry	CO	80504
106	Cowgill, Allison	CO	80525
107	Creswell, Richard	CO	80227
108	Crist, Kathy	CO	81401
109	CROSHAW, HEATHER	CO	81504
110	Cunningham, Cynthia	CO	80304
111	Cutler, Robert	CO	80503
112	Daehnick, Debbie	CO	80465
113	Dobson, Patricia	CO	80863
114	Doyle, Kathleen	CO	80403
115	du Mont, Lyn	CO	80401
116	Earle, David	CO	80504

No.	Signatory Name	Home State	Home Zip Code
117	Emmett-Mattox, Stephen	CO	80503
118	Feder, Janet	CO	80205
119	Finnegan, Pamela	CO	80228
120	Gavison, Sarah	CO	80026
121	Gebhardt, Josi	CO	80121
122	Godwin, Cristy	CO	80209
123	Goldin-Dubois, Jon	CO	80212
124	Goodin, Dale	CO	80227
125	Gordon, Deborah	CO	80537
126	Goss, Liza	CO	81503
127	Graf, Steven	CO	80215
128	Gridley, Angie	CO	81007
129	Griffin, Lynne	CO	80017
130	Gruenberg, William A.	CO	81611
131	Guendelsberger, Debra	CO	81133
132	Hayes, Sarah	CO	80026
133	Hazelbaker, Kate	CO	80206
134	Hendry, Dawn	CO	80127
135	Henry, Charles	CO	80134
136	Holland, Kate	CO	80247
137	Hoppman, Susan	CO	80206
138	Howes, Constance	CO	80027
139	Hudson, Scott	CO	80138
140	Hunter, Erica	CO	80904
141	Hvoslef, Erik	CO	81201
142	Jacobsen, Brad	CO	80516
143	Jahn, Beverly	CO	80205
144	Jaimet, Elizabeth	CO	80234
145	Jeffreys, Zachary	CO	80004
146	Kantola, Angela	CO	80127-9434
147	Kraus, Glenn	CO	80909
148	Kuurstra, Selma	CO	81211
149	Lang, Julie	CO	80206
150	Leigh, Tracy	CO	80478
151	Liebert, Danna	CO	80113
152	Lieurance, Francelia	CO	81201
153	Lohr, Margaret	CO	80022
154	Long, Leland	CO	80206
155	Love, Adam	CO	80223
156	M, Pat	CO	80521
157	Mack, Mary	CO	80210
158	Matherly, Norma	CO	80305
159	Meeks, Mark	CO	80421
160	Merrigan, Anita	CO	80487
161	Mohseni, Leila	CO	80302

No.	Signatory Name	Home State	Home Zip Code
162	Myers, David	CO	81401
163	Naiman, Karen	CO	80247
164	Nakhai, Mandana	CO	80223
165	Nease, Lynn	CO	80112
166	Niosi, Marnie	CO	80127
167	Oken, Tom C	CO	81615
168	O'Shea, Carolyn	CO	80220
169	O'Sullivan, Brett	CO	80026
170	P, Hannah	CO	80211
171	Phillips, Steven	CO	80302-4710
172	Pipal, Tom	CO	80138
173	Porcher, Janeene	CO	80401
174	Redden, Katie	CO	81632
175	Rhodes, Donna	CO	80301
176	Roberts, Zoe	CO	80524
177	Rogers, Starrlet	CO	80031
178	Sawyer, Ryan	CO	80218
179	Schultz, Mallory	CO	80233
180	Scott, Michele	CO	80478
181	Senger, James	CO	81122
182	Sewald, Michelle	CO	80202
183	Sherrer, Kayan	CO	80204
184	Snyder, Darrel	CO	80521
185	Somsky, Don	CO	80108
186	Spires, Tara	CO	80020
187	Stark, Lee	CO	80017
188	Stidham, Greg	CO	81201
189	Stieg, Janna	CO	80249
190	Stratman PhD, James	CO	80204
191	Strunk, Mark	CO	80031
192	Talbot-Heindl, Chris	CO	80246
193	Tavares, Dennis	CO	80301
194	Telle, Hannah	CO	80202
195	Tempelman, Steven	CO	80124
196	Townshend, Elisa	CO	80206
197	Trafficanda, Jamie	CO	80209
198	Trilsch, Richard	CO	80301
199	Tripp, Tom	CO	80524
200	Triptow, Ld	CO	80109
201	Troutman, Dave	CO	80521
202	Van Cleave, Whitney	CO	80203
203	Vasquez, Heather	CO	80238
204	Vercos, Stasia	CO	80923
205	Walker, Bob	CO	80209
206	Wallingford, Sarah	CO	80530

No.	Signatory Name	Home State	Home Zip Code
207	Waterworth, Laura	CO	80013
208	Weger, Evan	CO	81601
209	Wiegers, Kristen	CO	80033
210	Wood, Susan	CO	80403
211	Wright, Priscilla	CO	80128-7010
212	Wyatt, Janet	CO	81521-8750
213	Yeoman, Leigh	CO	80021
214	Yonker, Briay	CO	80910
215	Zarur, Carlos	CO	80026
216	Ziegler, Cynthia	CO	81428
217	de Arteaga, Jose	DC	20001
218	Kahan, Cynthia	DC	20015
219	Craig, Ann	FL	34242
220	Banks, Jerry	GA	30030
221	Swa, Mol	ID	83615
222	Brumbaugh-Cayford, Cheryl	IL	60123
223	Kreiner, Dennis	IL	60110
224	Krueger, Robert	IL	60626
225	Lein, Doris	IL	60560
226	Plovnick, Isaiah	MA	2445
227	Stewart, Sarah	MA	2472
228	Meulendyk, Wayne	MI	49546
229	Hunt, Donald	MN	56601
230	Sanford, Ellen	MN	55805
231	Bollinger, Roni	MT	59001
232	Conroy, Faith	MT	59720
233	Dunkum, John	MT	59801
234	McClure, Susan	MT	59715
235	Babik, Cristina	NJ	8510
236	Alonzo, Leo Elizabeth	NM	87507
237	Arnoldy, Jotham	NM	88061
238	Batty, Vernon	NM	88047
239	Berger, Rhonda	NM	87532-3295
240	Budge, Alexander	NM	87510
241	Burval, Daniel	NM	87567
242	Cameron, Debra	NM	87015
243	Cote, Susan	NM	87048
244	Decker, Dewette	NM	87107
245	Engle, I.	NM	88352
246	Field, Les	NM	87106
247	Glasscock, Rita	NM	87507
248	Gore, Judith	NM	87114
249	Howard, Linda	NM	87002
250	Hull, Cynthia	NM	87301-4516
251	Johnson, Bettemae	NM	87123

No.	Signatory Name	Home State	Home Zip Code
252	Kourdae, Monique	NM	87109
253	Kutz, Susan	NM	88012
254	Licini, Carol	NM	87501
255	Louisell, Catherine A	NM	87562
256	McCarter, Angel	NM	87110
257	Messick, Scott	NM	87557
258	Montoya, Thomasine	NM	87124
259	Morrison, David	NM	87107
260	Parrish, George	NM	87002
261	PEIRCE, Susan	NM	87506
262	Quail, Kevin	NM	87043
263	Ramsey, Patrick	NM	87114
264	Southward, Roger	NM	87043
265	Sunde Jr, Robert J	NM	87124
266	Tauer, Pamela	NM	88345
267	Valdez, Shirley	NM	87112
268	VrMeer, Janice	NM	87508
269	W, LeRoy	NM	87059
270	Wilbur, Leslie	NM	88005
271	Wilkinson, L.L.	NM	87571
272	Wyse, Margo	NM	88049
273	Yuen, Nancy	NM	87122
274	Corrigan, Jennifer	NV	89143
275	Criddle, Carol	NV	89436
276	Dickson, Mary	NV	89403
277	Drost, Deanna	NV	89521
278	Fournier, Ellan	NV	89128
279	Gill, Alan	NV	89134
280	Glier, Ingeborg	NV	89084
281	Hanson, Marguerite	NV	89005
282	Hewitt, Roxanne	NV	89074
283	Katzen, James	NV	89169
284	Kerr, Rebecca	NV	89130
285	Lurtz, Jamie	NV	89121
286	Malone, Sheila	NV	89147
287	Martinez, Deb	NV	89521
288	Pratt, Scott	NV	89115
289	Rakaczky, Rachel	NV	89431
290	Reynolds, Kathryn and Marc	NV	89406
291	Russell, Earleen	NV	89436
292	Simpson, Malcolm	NV	89104
293	Sullivan, Frances	NV	89460
294	Sullivan, Sharon	NV	89503
295	Waldo Gaffney, Jennifer	NV	89166
296	Walls, Janet	NV	89423

No.	Signatory Name	Home State	Home Zip Code
297	Weibel, Gail	NV	89429
298	Whitlock, Patricia	NV	89108
299	Wilson, Tina	NV	89048
300	Woods, James	NV	89701
301	Ferman, Pam A.	NY	12487
302	Grimm, Edward	NY	11570
303	Hough, Dennis	NY	13205
304	Quail, Jihan	NY	10024
305	Eells, Victoria	OR	97444
306	Nettleton, John	OR	97202
307	Confer, John	PA	15419
308	Hoffman, Tara	PA	17365
309	Middleton, Deven	PA	19145
310	Swank, Carrie	PA	19608
311	Aylard, Adrianna	SC	29205
312	Hansen, Julie	SD	57029
313	Zaccari, Laura	TN	37069
314	Adkins, Patti	TX	75007
315	Lowery, Margaret	TX	77973
316	Young, Ginger	TX	77379
317	Anderson, J	UT	84660
318	Baugh, Jennifer	UT	84129
319	Brown, Leslie	UT	84111
320	Cansler, Sarah	UT	84307
321	Carolan, Patrick	UT	84106
322	Cavazos, Mark	UT	84093
323	Denison, Nicole	UT	84121
324	Fahey, Nancy	UT	84121
325	Hansell, Warwick	UT	84121
326	Hunter, Carol	UT	84403
327	Keiley, Daniel	UT	84402
328	Kessler, Mary	UT	84081
329	Kirk, Roberta	UT	84123
330	Knierim, Kristan	UT	84501
331	Krasner, Shay	UT	84096
332	Middleton, Richard	UT	84103
333	Moench, Malin	UT	84121
334	Mullarkey, T	UT	84770
335	Pettit, Kimberly	UT	84532
336	Rogers, Judy	UT	84098
337	Rutherford, Lisa	UT	84738
338	Van Dame, Kathy	UT	84121
339	Williams, Sarah	UT	84106
340	Boots-Lautieri, Kathleen	VA	23024
341	Blackwood, Barbara	WA	99206

No.	Signatory Name	Home State	Home Zip Code
342	M Lasserre, Courtney	WA	98004
343	Rosen, Michael	WA	98040
344	Shrewsbury, George	WA	98244
345	Sinclair, Madeleine	WA	98382
346	Overby, Gary	WI	54234
347	Donahue, Amy	WV	26582
348	Dietzmann, Cynthia	WY	83014
349	Gummel, Janis	WY	82007
350	Jern, Jessica	WY	83014
351	Krause, Sue	WY	82001
352	Materi, Sandra	WY	82604
353	Mott, Macey	WY	83002
354	Savage, Tim	WY	82901
355	Simmons, Nancy	WY	82935
356	Walters, Rick	WY	82070
357	Widdoss, Lynn	WY	82633

Yampa-White-Green Basin Roundtable

August 15, 2023

To: Bureau of Reclamation, Department of Interior
Attn: Post-2026 (Mail Stop 84–55000)
P.O. Box 25007
Denver, CO 80225

RE: Notice of Intent to Prepare an Environmental Impact Statement and Notice To Solicit Comments and Hold Public Scoping Meetings on the Development of Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead

To Whom it may Concern,

Introduction

The current crisis on the Colorado River (hereafter "River") is well documented. Overuse, reduced flows, and historically-low reservoir levels have put all water users at risk. It is imperative that both near- and long-term changes be made in the operational strategies and policies throughout the Colorado River System. This Position Statement outlines key concepts that the Yampa/White/Green Basin Roundtable believes are critical to bringing an end to crisis-driven emergency operations. It presents both Drought Relief/Short-Term Solutions and Post-2026 Operational Strategies that support the goal of returning the river and reservoir systems to healthy function within the current multi-year drought and beyond.

Background on Roundtable Structure and Purpose

The State of Colorado facilitates and organizes water planning through a Roundtable structure. Each of the nine Basins in the State is represented by a Roundtable of elected and appointed members. Each Roundtable works both autonomously and collaboratively with other Roundtables to address projects and policy issues within each Basin and across the State. The Yampa/White/Green Basin Roundtable serves in this capacity for 3 important tributaries to the Colorado River.

The Yampa/White/Green Basin (hereinafter "Y/W/G Basin" or "Our Basin") has a keen strategic interest in the current crisis on the Colorado River. The importance of these three rivers to Our Basin cannot be overstated; they are the lifeblood of our economy, the backbone of our communities, and affect every person every day.

Despite a perception among some outside the Y/W/G Basin, the current drought has already significantly impacted the Yampa/White/Green system. All water users have experienced natural reductions in available water for agricultural, commercial, municipal, recreational, environmental, and residential uses during the past few years. Particularly for tributary water right holders, drought-reduced flows have created water-short systems that result in 'natural curtailment' of usage. Although natural curtailment has become commonplace while water users in our basin adjust to these shortages, the cumulative impacts become more significant in each year of persistent drought and are increasingly difficult to manage.

Our Basin is acutely aware of the extended drought and the Lower Basin States' continued water use beyond its apportioned amounts. Decisions made by the Bureau and the Upper Colorado River Commission ("UCRC"), together with the Upper Basin ("UB") and Lower Basin ("LB") States, when attempting to mitigate immediate shortages and to operate the Colorado River system sustainably over the long term directly impact all water users within the Y/W/G Basin.

Post -2026 Operating Principles

The river system operations are now primarily governed by the 2007 Interim Guidelines that expire in 2026 and which, to an extent, are responsible for the current Colorado River crisis. The Y/W/G believes the post-2026 Guidelines for Operational Strategies that are now being designed and developed by the Bureau should address the following:

1. Plan for a range of future hydrological and growth scenarios; the future operating principles should account for forecasted hydrology and growth, including snowpack monitoring and other weather forecasting technology, and soil moisture measurement, rather than relying exclusively on historical and current reservoir levels.
2. Allocate risk from climate change fairly between Upper and Lower Basins; use a methodology based on known scientific climate/drought impacts to adjust future Powell releases.
3. Formalize and codify operating policies to ensure that UB-conserved water (DROA or DCP/DM) remains in Lake Powell; protect any water moved downstream from a CRSPA facility into Lake Powell for the purposes of infrastructure or hydroelectric generation, or any water conserved through

DROA/DCP/DM measures, for its intended purpose, which is to ensure that the UB can meet future Compact obligations.

4. Use small, incremental releases balanced with conservation to meet shortages, rather than large-volume, tier-based releases.
5. Formalize and codify operating policies to address structural deficit accounting in the LB; institute accounting procedures to deal with system losses, including transit and evaporative losses, in a proportional and fair manner, so that losses are shared equitably between both Basins.
6. Implement operating strategies to stay within current Compact apportionment based on efficiencies, conservation, and infrastructure improvements, rather than on migration of water resources from Upper to Lower Basin; specifically prohibit the severing of a water right located and beneficially used in the Upper Basin through sale and transportation to a Lower Basin location.

Conclusion

Recognizing that it will require collaboration across the entire system to resolve our current challenges, we in the Yampa/White/Green Basin Roundtable stand ready to do our part. We intend to support fully a unified approach to resolving this crisis, as a member of the Colorado River District, the State of Colorado, the Upper Basin of the Colorado River System and that System as a whole. We commit to work with the Bureau, the UCRC, and representatives of Upper and Lower Basin States to find solutions that will be practical and sustainable, and that benefit all people in the Colorado River System.

With that said, we must also reiterate that along with our Basin's, State's, and the Upper Basin's efforts, there must be focused, concerted conservation in the Lower Basin, resulting in realistic and sustainable usage within the limits of its intended Compact appropriation, including evaporation, and accounting for reduced hydrology. And beyond 2026, operating principles implemented for the Colorado River System must be sustainable, fair, and equitable.

Sincerely yours,

Alden Vanden Brink
Yampa-White-Green Basin Round Table Chairperson

YUMA COUNTY WATER USERS' ASSOCIATION

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August 15, 2023

The Honorable Camille Calimlim Touton
Commissioner
Bureau of Reclamation
Attn: Post-2026 (Mail Stop 84-55000)
P.O. Box 25007
Denver, CO 80225
crbpost2026@usbr.gov

Re: *Yuma County Water Users' Association's Comments on the Scope of Specific Operational Guidelines, Strategies, and Related Issues to be Considered in Forthcoming Environmental Impact Statement re: Development of Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead*

Dear Commissioner Touton:

The Yuma County Water Users' Association (Association) appreciates the opportunity to provide comments on the Bureau of Reclamation's (reclamation) Notice of Intent to Prepare an Environmental Impact Statement and Notice to Solicit Comments and Hold Public Scoping Meetings on the Development of Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead, Fed. Reg. Vol. 88, No. 116, p.39455 (June 16, 2023).[1] The Association was incorporated in 1903 and is a private, not-for-profit corporation validly existing under the laws of the State of Arizona. The Association's shareholders are the water rights owners in Reclamation's Valley Division of the Yuma Project. The Association's shareholders have Present Perfected Rights (PPRs) to the Colorado River attached to the land they own with a priority date of 1901. The Association's landowners hold among the most senior Colorado River water entitlements both within Yuma as well as within the state of Arizona and therefore possess significant interests that must be taken into account with respect to any potential adjustments to Colordo River operations and allocations. To that end, below we set forth two significant issues that should be considered by Reclamation in the development of its forthcoming environmental impact statement ("EIS").

1. The EIS Should Honor and Adhere to the Law of the River, Priority, and PPRs

The Association and others have PPRs to Colorado River that are firmly entrenched, arising from the Law of the River, which is comprised of more than 100 years of contracts, pacts, treaties,

[1] The Association recognizes that any revisions to the delivery obligations to Mexico are outside the purview of the EIS. However, the Association believes that if water deliveries are curtailed to the Lower Basin states, deliveries should be curtailed to Mexico as well.

regulations, statues, and Supreme Court precedent. In reliance on those longstanding rights, the Association's shareholders and other Yuma area farmers have created a complex agricultural ecosystem that is the epicenter of production for our nation's consumable produce during the winter months. Yuma's farmers have invested substantially in on-farm infrastructure to obtain improvements in water use efficiency, making Yuma among the most efficient users along the Colorado River. The total market value of Yuma's on-farm capital assets, including land, buildings, and machinery, is nearly $1.8 billion.

The Law of the River makes clear that the Association's and others' priority of use with respect to Colorado River water must be respected. Any post-2026 guidelines and strategies, including any conservation efforts,[2] must therefore adhere to the existing priority system, which is described more fully below.

A. The Association's Contractual Rights Date Back to 1906

The Association first contracted with the Secretary of the Interior in 1906. Its contract provides "rights to the use of water" from the Colorado River to the Association, its incorporators, share-holders, and constituents and their assigns or successors "which rights shall be and thereafter continue to be forever appurtenant to designated lands owned by such shareholders and constituent members." Unlike other agreements entered into by the Secretary of the Interior, the Association's rights are to the beneficial use of Colorado River and not the consumptive use, which entitles the Association's shareholders to use the water they need to grow crops on their land. Further, the contract states that the Association's right to water is "now vested" and that it may, itself, determine "the relative priority and the extent of their several appropriations . . . to the use of such waters." The Secretary of the Interior is contractually obligated to "impose no rule or regulation interfering with any vested right of the shareholders of the Association. . ." That is, the 1906 contract perfected the Association's rights to the use of Colorado waters, forever tied to those lands with water rights in the Valley Division of the Yuma Project pursuant to whatever priorities and apportionment that the Association itself decides on for its members.

The Association and the Department of Interior executed a second contract in 1951, which provided that the "United States will . . . deliver to or for the Association . . . such quantities of water . . . as may be ordered by the Association and as may be reasonably required and beneficially used for the irrigation of the irrigable lands situate[d] within the division, . . . subject to . . . the Colorado River Compact and the [Boulder Canyon Project Act]." § 12(a). Further, consistent with the 1906 contract, the 1951 contract reiterated that "such rights . . . as the Association or the landowners within the division may have heretofore acquired to the use of water from the Colorado River are unimpaired by this contract." § 12(a)(4).

B. Supreme Court Recognizes PPRs and Priority System in *Arizona v. California*

[2] Although the Colorado River Basin is currently in a shortage condition, there is a possibility that the basin may, in the future and during the term of the post-2026 EIS, find itself in a surplus condition. In that event, the Association believes that the Law of the River should also control the delivery of surplus flows.

In a series of decisions in *Arizona v. California* dating back to 1963, the Supreme court has repeatedly recognized and reaffirmed the priority system and the obligation to satisfy PPRs. *See Arizona v. California,* 373 U.S. 546, 584 (1963) (upholding the Boulder Canyon Project Act apportionments of water amongst the Lower Basin states, noting that "[o]ne of the most significant limitations in the Act is that the Secretary is required to satisfy present perfected rights . . . ."); *Arizona v. California,* 376 U.S. 340, 351-52 (1964) (issuing a decree implementing its 1963 decision, directing the states to furnish "a list of the present perfected rights, with their claimed priority dates," and defining PPRs as "a water right acquired in accordance with state law, which right has been exercised by the actual diversion of a specific quantity of water that has been applied to a defined area of land or to definite municipal or industrial works . . . ."). In 1979, the Supreme Court incorporated into its decree the states' PPRs, including the Association's entitlement. *Arizona,* 439 U.S. 419, 423-24 (1979).[3] And, as recently as 2006, the Supreme Court reiterated that, when insufficient mainstream water is available for release, the government is required to "satisf[y] present perfected rights in the order of their priority dates without regard to the state lines" before other measures are taken. *Arizona v. California,* 547 U.S. 150, 155 (2006).

C. Congressional Action Afirms PPRs

In 1922, the Colorado River compact was signed, which is an agreement between the states of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming to establish the equitable division and apportionment of the waters of the Colorado River. The Compact established the apportionment of 7.5 MAF per year each to the Upper and Lower Basin States. Importantly, it also declared that "[p]resent perfected rights to the beneficial use of waters of the Colorado River System are unimpaired by this compact," Art. VIII, establishing a clear recognition amongst the Basin States and the federal government that PPRs must be respected.

In 1928, the Boulder Canyon Project Act authorized the construction of the Hoover Dam and divided the Lower Basin Colorado River water apportionment amongst the states. Consistent with the 1922 Colorado River Compact, the Act upheld PPR entitlement, requiring that the dam and reservoir be used "[f]irst, 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." § 6.

[3] Specifically, the Supreme Court held that the Association's PPRs entitle the "Valley Division, Yuma Project [represented by the Association] [to] annual quantities not to exceed (i) 254,200 acre-feet of diversions from the mainstream or (ii) the quantity of mainstream water necessary to supply the consumptive use required for irrigation of 43,562 acres and for the satisfaction of related uses, whichever of (i) or (ii) is less, with a priority date of 1901." *Arizona v. California,* 439 U.S. 419, 423-24 (1979) (emphasis omitted).

[4] For the purposes of these scoping comments, the Association is focusing its analysis on ICS accounting because of its intersection with the priority system and PPRs. For the avoidance of doubt, the Association reserves all rights to later address other aspects of any ICS mechanism (or any other conservation measures) proposed by Reclamation in the forthcoming draft EIS.

Over the past 100 years, the Law of the River has never wavered with respect to the sanctity of the priority system and PPRs. Any post-2026 guidelines and strategies for Lake Mead and Lake Powell should thus adhere to the priority system, respect PPRs, and uphold the Law of the River. This means that any mechanisms for voluntary conservation and storage, such as intentionally created surplus (ICS),[4] must provide that any water stored in Lake Mead is junior in priority to the rights of PPR holders (i.e., a junior water user should not be permitted to use ICS to supersede the water rights of a more senior water user). Similarly, any involuntary reductions to water allocations, such as those contemplated by the 2019 Drought Contingency Plan, must also recognize and uphold the rights of PPR holders to the annual flows of the Colorado River.

2. **The EIS Should Not Penalize Water Users for Being Efficient**

Any post-2026 strategies should also recognize Colorado River users' water efficiency and any modifications to allocations should reward, rather than penalize, efficiency. Doing otherwise, and penalizing users for having made substantial prior investments in water efficiency, would disincentivize conservation and lead to further strain on the river's limited supply.

Yuma's Colorado River water usage is currently at a 50-year low, and Yuma farmers have made significant investments in improving their efficiency of water use. Yuma farmers have improved their efficiency through a combination of multi-crop production systems, improvements to on-farm infrastructure, and district-wide modifications.

In contrast to may other agricultural users of Colorado River water. Yuma rotates its crops twice per year, which enables it to use substantially less water in July through September. In the fall and winter, Yuma farmers grow vegetables such as lettuce, spinach, kale, and cabbage; then, in the spring and summer, they switch out the winter vegetables for other crops, such as melons, wheat, and sudan grass. Because the spring/summer crop matures in the late spring or early summer, irrigation is not needed during the latter half of the summer, when high temperatures cause high evaporative demand.

Yuma's farmers have also invested substantially in on-farm infrastructure to obtain improvements in efficiency, including adopting alternative water delivery systems, such as sprinkler and drip irrigation. They have also shortened their irrigation runs to increase efficiency and modified conveyance systems and turnouts to allow for high-volume water deliveries, which lower the opportunity time for water to infiltrate below the root zone. Yuma's farms also utilize furrow geometry—*i.e.*, the furrows are pressed into a right trapezoidal configuration using a press wheel, which reduces friction and enables rapid movement of the water. Finally, Yuma's fields benefit from widespread adoption of clean cultivation as well as precision field leveling lasers, which together result in improved water distribution and increased water conservation.

As technology improves and/or funding becomes available, Yuma farmers will continue to take measures to improve efficient water use. The post-2026 EIS should recommend the allocation

of federal and state monies throughout the basin to line or pipe irrigation canals, foster innovation in water delivery systems, invest in desalination, and provide infrastructure for users, such as the Association, that can create return flows to the Colorado River.

Yuma is not alone in its efforts to maximize efficiencies. And, given the federal government's recent funding of infrastructure projects throughout the Colorado River Basin, we anticipate additional efficiencies will be gained by numerous users. When considering any adjustments to allocations as part of its analysis or post-2026 operations, Reclamation should not penalize users like the Association and other Yuma farmers who are maximizing water efficiency and making extraordinary efforts to conserve this scarce resource.

3. Reservation of Rights

By providing these comments, the Association does not waive any rights, including any claims or defenses. Further, any failure by the undersigned to address specific aspects of the NOI 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. The Association also reserves the right to provide further comments and engage with Reclamation as it proceeds with subsequent phases of the EIS process.

The Association appreciates the opportunity to provide these scoping comments and looks forward to working cooperatively with Reclamation and other stakeholders to continue to protect the Colorado River.

Sincerely,

James H. Auza, President
Board of Governors
Yuma County Water Users' Association