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March 2, 2026

Sent via Electronic Mail

Hon. Scott J. Cameron
Acting Commissioner
U.S. Bureau of Reclamation
1849 C Street, NW
Washington, D.C. 20240
Attention: BC00-1000
crbpost2026@usbr.gov

Re: Yuma County Water Users' Association's Comments on Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead – Draft Environmental Impact Statement.

Dear Commissioner Cameron:

I represent the Yuma County Water Users' Association ("YCWUA"). YCWUA appreciates the opportunity to provide comments on the Bureau of Reclamation's ("Reclamation's") Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead – Draft Environmental Impact Statement (the "Draft EIS"). YCWUA joins in the comments submitted by the Yuma Area Irrigation Districts and the Colorado River Indian Tribes ("CRIT") and shares the concerns raised in those comments. Reclamation must fully consider the Law of the River and ensure that any plan to manage the Colorado River respects the priority system that has governed the River for over a century.

The Draft EIS fails to consider any alternative that enforces compliance with the Colorado River Compact ("Compact"), which violates federal law requiring Reclamation to implement the Compact. The Draft EIS does not contemplate any reductions in Upper Basin water use. The Draft EIS fails to adequately consider the substantial economic and national security impacts in Arizona that would result from water reductions under the alternatives, including impacts on rural agricultural communities like Yuma. It fails to honor the federal government's trust obligations to Native American tribes. In addition, the Draft EIS fails to implement the full extent of Reclamation's authority to release water from Colorado River Storage Project ("CRSP") Upper Initial Units into Lake Powell for delivery to the Lower Basin.

YCWUA supports a post-2026 plan for the Colorado River that protects the system's water delivery and power generation; rebuilds the contents of the system; shares reductions among the Lower Basin, the Upper Basin, and Mexico; and maintains the priority system as a pillar of the Law of the River. YCWUA is part of the solution.

Yuma growers are among the most economically productive and efficient in the country. They are operating at the outer limits of efficiency, growing the most crop-per-drop anywhere in

the Lower Basin. Yuma farmers invest every year in conservation that leaves hundreds of thousands of acre-feet (“AF”) in the system for lower priority users. Water conservation measures that would yield additional water in other regions have already been in place in Yuma for years.

Yuma’s Colorado River water usage is currently at a 50-year low, and Yuma is 75% more efficient than the rest of the Colorado River Basin. Even within Arizona, it stands out as the efficient user among the other five counties using Colorado River water. Yuma has achieved these efficiencies through a combination of multi-crop production systems, improvements to on-farm infrastructure, and district-wide modifications. In short, YCWUA’s members have already made substantial investments in water efficiency and should not be punished for their leadership in water conservation.

BACKGROUND

YCWUA was organized in 1903 as a private non-profit corporation with the purpose of facilitating the United States’ development of the Yuma Project. YCWUA serves a total of 11,908 water users who possess rights for 53,450 irrigable acres, with approximately 45,000 of those acres currently being used for agriculture production. YCWUA shareholders are the water rights owners in Reclamation’s Valley Division of the Yuma Project. YCWUA is governed by a 7-person board of directors.

YCWUA is situated in Yuma, Arizona, which is known as the Nation’s Winter Salad Bowl Capital because it is responsible for 90% of North America’s vegetables and leafy greens during the winter months. Yuma supports a \$3 billion agricultural economy. 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 and wheat.

YCWUA does not itself hold water rights. Rather, the water users who are shareholders of YCWUA have their own water rights under federal law. They hold unquantified Priority 1 beneficial use rights that allow diversion of any quantity that can be beneficially used by lands associated with the right. Their Present Perfected Rights (“PPRs”) have been quantified at 254,200 acre-feet/year for Compact accounting purposes calculated by measuring diversion and return flows.

With PPRs dating back to 1901, YCWUA shareholders hold Colorado River water entitlements that are among the most senior in the state of Arizona.¹ These Priority 1 rights predate the Boulder Canyon Project and other water developments on the River. They are certificated and not the subject of contracts with the Secretary. In other words, YCWUA shareholders do not hold their rights as Section 5 contractors.

¹ See Yuma Cnty. Agric. Water Coal., A Case Study in Efficiency – Agriculture and Water Use in the Yuma, Arizona Area 8 (Feb. 2015) (“2015 Yuma Study”), https://desertagsolutions.org/sites/desertagsolutions.org/files/attachment/ACaseStudyInEfficiency_YCAWC.PDF.

Unlike other areas within Arizona, Yuma relies almost entirely on Colorado River water for its agricultural and municipal supplies and has limited opportunities to store or benefit from conserved water due to Compact accounting practices and physical realities of the hydrology and hydrogeology.

Instead, Yuma's farmers have invested substantially in on-farm infrastructure to obtain improvements in water use efficiency and are widely acknowledged as the most efficient agricultural users in the Colorado River Basin.² Yuma has achieved these efficiencies through a combination of multi-crop production systems, improvements to on-farm infrastructure, and district-wide modifications. In contrast to many 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. Because the spring/summer crop matures in late spring or early summer, irrigation is not needed during the latter half of the summer, when high temperatures cause high evaporative demand.³

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 shortened their irrigation runs to minimize run-off and have 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, in which furrows are pressed into a tight trapezoidal configuration using a press wheel to reduce friction and enable rapid movement of irrigation water. 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. Nearly 90% of lateral canal miles, more than 70% of main canal miles, and approximately 80% of on-farm ditches in Yuma are lined with concrete, which helps to minimize system losses to evaporation, seepage, and water-absorbing phreatophytes.

Even as agricultural production in Yuma County has increased, our farmers have also improved efficiency of their water use. In fact, the rate of water diverted to farms has decreased 15 percent since 1990 and nearly 18 percent since 1975. As a result, YCWUA shareholders have generated substantial unused entitlements that have been made available to other Arizona water users. For example, in 2024 YCWUA had 44,863 unused PPRs (254,200 AF (priority 1) minus

² See, e.g., Duval et al., *Economic Contribution of Yuma County Agriculture* 8, 21–29 (Feb. 2025) (“Duval et al., 2025 Yuma Study”), <https://repository.arizona.edu/handle/10150/678573>; George B. Frisvold & Dari Duval, *Agricultural Water Footprints and Productivity in the Colorado River Basin*, 11 *HYDROLOGY*, no. 5, 2024, at 9–10, <https://doi.org/10.3390/hydrology11010005>.

³ See George B. Frisvold et al., *Evaluating Gravity-Flow Irrigation with Lessons from Yuma, Arizona, USA*, 10 *SUSTAINABILITY*, no. 1548 at 12–13 (2018) (“Frisvold et al., *Gravity-Flow Irrigation Lessons from Yuma*”), <https://wrrc.arizona.edu/sites/default/files/attachment/sustainability-10-01548.pdf>.

209,377 AF consumptive use (311,917 AF diversion – 102,540 return flow)). This volume fluctuates up and down to some degree each year based on a variety of factors.

Because beneficial use rights are diversion rights, the level of return flows does not impact the legal entitlements of YCWUA water rights holders. However, return flows do impact Arizona’s overall entitlement from a Compact accounting perspective, and YCWUA has voluntarily devoted significant resources to maximize returns for the broader benefit of Arizona. YCWUA (and other districts) has worked closely with CAP and the State of Arizona to increase return flows through investment and aggressive operation of groundwater recovery wells. Thus, YCWUA is already working to maximize the amount of return flow delivered to Mexico through the Southern International Boundary in order to help the United States fulfill Treaty obligations to Mexico. For example, YCWUA returned nearly 96,000 AF in 2024. Significant measured and unmeasured return flows to the River are also accounted for as part of the Bureau’s annual accounting process.

DISCUSSION

YCWUA maintains that compliance with the Law of the River and adherence to the priority system are paramount. YCWUA appreciates that Reclamation assumed compliance with the priority system in the majority of the alternatives considered in the Draft EIS: the No Action Alternative, Basic Coordination Alternative, Maximum Operational Flexibility Alternative, and half the scenarios modeled in the Supply Driven Alternative. YCWUA also appreciates Reclamation’s recognition that models distributing shortage outside the priority system “would involve modifications to certain laws, contracts, agreements, and other authorities that are part of the Colorado River legal and contractual framework referred to as Law of the River.” Appendix C, at C-2 through C-3. The Draft EIS correctly states these approaches would “diverge from provisions in the Consolidated Decree and other applicable Federal law” and acknowledges that “[s]uch proposals may ultimately not be implementable.” *Id.* at C-3. YCWUA urges Reclamation not to consider any alternative that does not comport with the priority system, fails to respect PPRs, and thus runs afoul of the Law of the River.

Reclamation must fully consider the Law of the River and ensure that any plan to manage the Colorado River respects rights enshrined in interstate compacts, federal legislation, and Supreme Court orders. YCWUA is concerned that the Draft EIS does not give adequate attention or recognition to rights established by the Law of the River. In particular, the Draft EIS fails to include alternatives that enforce Compact compliance, which is unacceptable to YCWUA.

In addition, Reclamation must adequately consider the impact of water reductions on national security, on municipal and industrial uses, and on rural agricultural communities like Yuma. YCWUA believes that the Draft EIS does not sufficiently consider those impacts. Yuma agriculture is important to Arizona and America, with a multibillion-dollar annual economy that employs the region and supplies the majority of the nation’s winter vegetables. Nowhere else in the country can substitute for Yuma’s winter agriculture.

In addition to its outsized role in feeding the Nation, Yuma supports two major military installations of significant national security consequence: a Marine Corps Air Station (“MCAS”)

and the Army’s Yuma Proving Grounds (“YPG”). Yuma’s arid climate and flat geography make it an optimal location for military bases and operations. MCAS hosts six squadrons of F-35B Joint Strike Fighters of the 3rd Marine Aircraft Wing and two Harrier squadrons, as well as Aggressor, Testing and Evaluation, and Aviation Weapons and Tactics squadrons. Approximately the size of Rhode Island, YPG is a major center for conducting weapons and systems testing for hot weather operations for the United States and its allies. YPG employs over 2,400 local civilians. The viability of the military bases is tied to the fortunes of Yuma’s agriculture because a vibrant local economy is necessary to support base operations and logistics and to provide military families an attractive place to live and raise their families.

The Draft EIS fails to adequately consider the impact of the alternatives on all of these considerations.

I. Reclamation Must Adhere to the Law of the River and the Priority System.

a. The Pillars of the Law of the River

i. YCWUA’s Priority Rights and Contracts with the U.S. Government

In 1902, Congress passed the Reclamation Act with the goal of “encourag[ing] family farming on modest sized parcels and to increase agricultural output by subsidizing the irrigation of formerly arid and unproductive lands.”⁴ The Act established a special “reclamation fund” intended to finance construction of the dams and canals needed to irrigate the West, based on payments by water users.⁵

After YCWUA incorporated in 1903, it petitioned Reclamation to build an irrigation project in Yuma Valley, resulting in a 1906 contract for the project between YCWUA and Reclamation.⁶ The 1906 Contract provides “rights to use of water” from the Colorado river to YCWUA, its incorporators, shareholders, and constituents and their assigns or successors, “which rights shall be and thereafter continue to be forever appurtenant to designated lands owned by such share-holders and constituent members.” Further, the contract states that YCWUA’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.” “[I]t is understood that the Secretary of the Interior shall impose no rule or regulation interfering with any vested rights of the shareholders” That is, the 1906 contract perfected YCWUA’s rights to the use of Colorado River waters, forever tied to those lands in Yuma County.

In 1951, YCWUA entered into a contract with the Bureau of Reclamation that confirmed its members’ rights to water allocation. Section 12(a) of the contract provides that the United

⁴ *Barcellos & Wolfsen, Inc. v. Westlands Water Dist.*, 899 F.2d 814, 824 (9th Cir. 1990); see Reclamation Act, Pub. L. No. 57-161 (1902).

⁵ Reclamation Act § 1.

⁶ *Yuma Project*, Bureau of Reclamation, <https://www.usbr.gov/projects/index.php?id=391> (last visited Feb. 26, 2026).

States will deliver such quantities of water “as may be ordered by [YCWUA] and as may be reasonably required and beneficially used for the irrigation of the irrigable lands situated within the division, together with such additional water as may be required for [YCWUA] to comply with its obligations [to supply, transport, and deliver water to the Yuma Auxiliary Supply Canal (also known as “Unit B”)],” “subject to [1] the availability of such water for use in Arizona under the provisions of the Colorado Water Compact and the [Boulder Canyon Project Act], and subject to: . . . [2] the availability of water for the division under the provisions of the Colorado River Compact.” The contract memorialized “the express understanding and agreement that such rights, if any, as [YCWUA] or the landowners within the division may have heretofore acquired to the use of water from the Colorado River are unimpaired by this contract.” Those rights include YCWUA’s PPRs.

ii. The Colorado River Compact and Related Legislation

In 1922, the seven Colorado River Basin states entered into the Colorado River Compact, which established an Upper and Lower Basin.⁷ Article III apportioned “to the Upper Basin and Lower Basin respectively the exclusive beneficial consumptive use of 7,500,000 acre-feet of water per annum, which shall include all water necessary for the supply of any rights which may now exist.” It also required the Upper Basin states to release (i.e., not deplete) at least 75 million acre-feet (“MAF”) to the Lower Basin over any 10-year period. Article VIII of the Compact provided that “[p]resent perfected rights to the beneficial use of waters of the Colorado River System are unimpaired by this compact,” establishing a clear recognition amongst the Basin States and the federal government that PPRs must be respected.

In 1928, the Boulder Canyon Project Act (“BCPA”) ratified the Colorado River Compact, authorized the construction of Hoover Dam (formerly Boulder Dam), and allocated the Lower Basin’s 7.5 MAF among Arizona (2.8 MAF), California (4.4 MAF), and Nevada (.3 MAF).⁸ Consistent with the 1922 Colorado River Compact, section 6 of the BCPA 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.”⁹

iii. The Colorado River Storage Act

In 1956, Congress passed the Colorado River Storage Project (“CRSP”) Act to authorize CRSP “initial units” or reservoirs, including Glen Canyon, Flaming Gorge, Navajo, and Aspinall Units.¹⁰ Under the CRSP, the Upper Basin stores water in these upper initial units (“UIUs”) for beneficial use “consistently with the provisions of the Colorado River Compact.”¹¹ The CRSP

⁷ Arizona did not ratify the Compact until 1944.

⁸ See Pub. L. No. 70-642, 45 Stat. 1057 (1928).

⁹ See *id.* at 1061; 43 U.S.C. § 617(e).

¹⁰ See Pub. L. No. 84-485, 70 Stat. 105 (1956).

¹¹ *Id.* at 106; 43 U.S.C. § 620.

Act was intended to help the Upper Basin meet its obligation in “assuring the required water delivery to the Lower Basin.”¹² The CRSP Act also authorized the secretary to build and operate hydroelectric powerplants, but on the condition that the Secretary “shall not affect or interfere with the operation of the provisions of the Colorado River Compact.”¹³

The CRSP and UIUs thus help to ensure that the Lower Basin may take its entitlements to 7.5 MAF per year and 75 MAF every 10-year period under the Colorado River Compact. “Glen Canyon Dam and Lake Powell, the key features of the CRSP, function like a bank account of water that is drawn upon in times of drought.”¹⁴ These UIUs regulate streamflows to allow the Upper Basin to meet water commitments to the Lower Basin and Mexico.

iv. Arizona v. California

In 1944, Arizona ratified the Colorado River Compact and began pursuing the Central Arizona Project (“CAP”) to deliver Colorado River water to Phoenix and Tucson. California opposed the project based on its senior water rights. In 1952, Arizona sued California in the Supreme Court.

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. In its 1963 decision, the Court stressed that “[o]ne of the most significant limitations in the [Boulder Canyon Project] Act is that the Secretary is required to satisfy present perfected rights.” *Arizona v. California*, 373 U.S. 546, 584 (1963).

In 1964, the Supreme Court entered a decree implementing its 1963 opinion and upholding the importance of PPRs. *See Arizona v. California*, 376 U.S. 340 (1964). The 1964 decree defined a “perfected right” to mean “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.” *Id.* at 341. It defined “[p]resent perfected rights” as those existing as of June 25, 1929, when the BCPA became effective. *Id.*

The 1964 decree then specified (1) the circumstances under and extent to which the United States may release mainstream water to the Lower Basin and (2) the apportionment of that water among the Lower Basin states. *See id.* at 342–43. If the Secretary of the Interior determined that “sufficient mainstream water is available for release . . . to satisfy [7.5 MAF] of annual consumptive use in [the Lower Basin], then . . . there shall be apportioned [2.8 MAF] for use in Arizona, [4.4 MAF] for use in California, and 300,000 acre-feet for use in Nevada.” *Id.* at 342. If the Secretary determines there is not enough mainstream water available to satisfy 7.5 MAF, however, then the Secretary may apportion the remaining amount as specified by the BCPA (as interpreted by the Court), but only “**after providing for satisfaction of present perfected rights in**

¹² *Colorado River Storage Project, History*, U.S. Bureau of Reclamation (Aug. 19, 2021), <https://www.usbr.gov/uc/rm/crsp/index.html>.

¹³ 43 U.S.C. § 620f.

¹⁴ *Colorado River Storage Project, Benefits*, U.S. Bureau of Reclamation (Aug. 19, 2021), <https://www.usbr.gov/uc/rm/crsp/index.html>.

the order of their priority dates without regard to state lines and after consultation with the parties to major delivery contracts and such representatives as the respective states may designate.” *Id.* at 342 (emphasis added); *see also id.* (“[I]n no event shall more than 4.4mm acre feet be apportioned for use in California including all present perfected rights.”). The priority dates are further defined in a 1966 amendment to the decree. 383 U.S. 268 (1966).

In 1979, the Court modified the decree to incorporate all PPRs as reported by the Lower Basin states.¹⁵ These PPRs are listed in the Appendix to the decree as updated in 2006. *See Arizona v. California*, 547 U.S. 150, 165, 167–81 (2006). In 2006, the Supreme Court reiterated that, when insufficient mainstream water is available for release, the government must “satisf[y] . . . present perfected rights in the order of their priority dates without respect to state lines” before other measures are taken. *Id.* at 155.

v. Colorado River Basin Project and the Central Arizona Project

In 1968, Congress passed the Colorado River Basin Project (“CRBP”) Act,¹⁶ which authorized construction of the CAP.¹⁷ CAP contractors’ rights are also junior to those of other water users in the Lower Basin, including YCWUA.

The CRBP Act respects PPRs, providing that mainstream diversions for CAP “shall be so limited as to assure” water availability “sufficient to provide for the aggregate annual consumptive use by holders of present perfected rights.”¹⁸

b. The Law of the River protects YCWUA’s priority rights.

The foregoing legislation and the decree in *Arizona v. California* protect YCWUA’s PPRs many times over. YCWUA’s PPRs were perfected in 1901 and were explicitly carried forward unimpaired by YCWUA’s 1951 contract with the United States.

The Supreme Court’s decision in *Arizona v. California* confirmed that PPRs are the highest existing priority, noting that the 1928 BCPA “requires satisfaction of ‘present perfected rights’ as used in the Compact.” *Arizona v. California*, 373 U.S. at 566. The original 1964 decree requires the Secretary to “provid[e] for satisfaction of present perfected rights in the order of their priority” before apportioning any remaining amount for consumptive use consistent with the BCPA. *Arizona v. California*, 376 U.S. at 342. The 2006 consolidated decree maintains that requirement and confirms that the “Valley Division, Yuma Project” (represented by YCWUA) is entitled to certain “annual quantities . . . with a priority date of 1901.” *Arizona v. California*, 547 U.S. at 155, 170. The decree confirms that CAP water rights are inferior to YCWUA’s PPRs by prohibiting

¹⁵ The 1964 decree directed the states to furnish “a list of the present perfected rights, with their claimed priority dates, in waters of the mainstream within each state, respectively, in terms of consumptive use, except those relating to federal establishments.” *Arizona v. California*, 376 U.S. at 351–52.

¹⁶ Pub. L. No. 90-537 (Sept. 30, 1968); 43 U.S.C. §§ 1501–56.

¹⁷ 43 U.S.C. § 1521.

¹⁸ 43 U.S.C. § 1521(b).

the Lower Basin states from interfering with the Secretary's release of water in satisfaction of PPRs. *Id.* at 159–60.

The CRBP Act further protects YCWUA's PPRs. As a requirement to obtain federal funding for CAP construction, the Central Arizona Water Conservation District ("CAWCD")—as the entity administering the CAP—agreed that its rights would be fourth priority, below other Lower Basin rights holders. The CRBP Act codifies that agreement and ensures that "diversions from the main stream for the [CAP] shall be so limited as to assure availability of water in quantities sufficient to provide for the aggregate annual consumptive use by holders of present perfected rights . . . and by users of the same character in Arizona and Nevada."¹⁹ YCWUA's PPRs have thus remained protected from 1901 to the present.

The Draft EIS recognizes the binding nature of the priority system but improperly considers alternatives that depart from it; those alternatives are not permissible under the law. Moreover, the Draft EIS fails to adequately consider the Upper Basin's obligations under the Law of the River, including the Upper Basin's obligation under the Compact to release an average of 7.5 MAF on a rolling 10-year basis, as well as its obligation to help the United States fulfill its Treaty obligation to release 1.5 MAF annually to Mexico. It also ignores the need for the Upper Basin states to conserve water and make reductions in use; instead, the Draft EIS assumes increases in Upper Basin consumption without adequate justification. And the Draft EIS fails to appreciate that UIUs must be managed for the benefit of the Lower Basin. Any final EIS must fully recognize the Law of the River and parties' rights and obligations under the Compact, including the Lower Basin option to make a priority call.

c. Storage Programs Must Not Be Used to Circumvent YCWUA's priority rights.

Reclamation should ensure that any storage programs are not used to circumvent the priority system by allowing delivery of water to junior users at a time when senior users are subject to reductions. The current system of Intentionally Created Surplus ("ICS") was not created until Reclamation's 2007 Interim Guidelines.²⁰ ICS is not mentioned in the Compact, Arizona v. California decree, or any of the other legal pillars of the Law of the River. It cannot be used to evade or avoid those fundamental legal principles.

Moreover, even under the current ICS system, Reclamation may not deliver ICS unless it determines that an ICS Surplus Condition exists, and no ICS can be withdrawn once Lake Mead falls to an elevation of 1025 feet. Any future storage program must contain similar restrictions in order to prevent circumvention of priority rights. In addition, any stored water must be assessed an accurate annual evaporation figure, and it should not be counted toward system contents in determining what reductions to impose in any given year. New storage must be operationally

¹⁹ 43 U.S.C. § 1521(b). The CRBP Act also subordinates CAP's priority to California's entitlement of 4.4 MAF per year. *Id.*

²⁰ Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead, 72 Fed. Reg. 62272 (Nov. 2, 2007).

neutral. Further, YCWUA and its members should also receive credit equivalent to storage credit for return flows that are pumped to Mexico, as this has the same effect as “storing” water in Mead, because it avoids the need for further releases of water to fulfill U.S. treaty obligations to Mexico.

II. The Draft EIS does not adequately analyze the impacts of delivery reductions on rural agricultural communities like Yuma that have maximized their water efficiency and conservation.

The Draft EIS insufficiently considers the impact of the proposed alternatives and reduced water delivery on rural agricultural communities like Yuma County. The Department of Interior has stated that “[w]hen considering whether the reasonably foreseeable effects of [a] proposed action or action alternatives would be significant,” including the “degree of the effects, the Responsible Official should . . . consider . . . the scope of the affected area (national, regional, or local), reasonably foreseeable trends and planned actions within that area, and the affected area’s natural and cultural resources,” as well as “[e]conomic effects” and “[e]ffects on the quality of life of the American people,” among other factors.²¹ Additionally, the Department has stated that an EIS must “include a detailed statement on . . . the relationship between local short-term uses of the human environment and the maintenance and enhancement of long-term productivity.”²² The Ninth Circuit has repeatedly insisted that “general statements” about future impacts do not satisfy NEPA. *Or. Nat’l Res. Council Fund v. Brong*, 492 F.3d 1120, 1134 (9th Cir. 2007).

Yuma’s agricultural business, of which YCWUA is a significant part, is inextricably intertwined with the Colorado River and the Law of the River. Moreover, Yuma agriculture is essential to the economic wellbeing and quality of life for Yuma County, Arizona, and the entire United States. Reclamation must consider how Yuma farmers use Colorado River water through their PPRs and other priority rights to generate billions of dollars in economic activity and supply crucial agricultural produce to the nation. Reclamation must also recognize Yuma farmers’ significant investments in technology and irrigation management that make their PPRs and other priority rights as economically productive and efficient as possible.

²¹ 516 DM 1 – U.S. Department of Interior Handbook of National Environmental Policy Act Implementing Procedures § 1.2(b) (Feb. 2026) (“DOI NEPA Handbook”), <https://www.doi.gov/media/document/doi-handbook-nepa-procedures>. The DOI NEPA Handbook defines “effects” to include “economic” effects, “either beneficial or detrimental, or both.” *Id.* at 24.

YCWUA recognizes that the Department has adopted its interim final rule of January 3, 2025 as a final rule. National Environmental Policy Act Implementing Regulations, 91 Fed. Reg. 8738 (Feb. 24, 2026). The interim final rule “removed most of the existing DOI NEPA regulations in favor of relying on Departmental guidance.” *Id.* at 8740. The Department now “maintain[s] the majority of its NEPA procedures . . . in [the above-cited] Departmental Handbook separate from the Code of Federal Regulations (CFR).” *Id.* at 8738; *see generally* DOI NEPA Handbook.

²² DOI NEPA Handbook, at 13.

a. Yuma farmers are among the most economically productive in the country.

Yuma farmers serve as a model of agricultural and economic productivity, all while operating in one of the harshest climates in the country. Over the past 60 years, Yuma farmers have increased the value of their crop production significantly, from about \$600 million in 1969 to about \$1.3 billion in 2022.²³ Yuma farmers achieved these significant economic gains in part by transitioning toward higher-value specialty crops, particularly winter vegetables. Over 50% of Yuma County farms specialize in high-value specialty crops like vegetables, melons, fruits, and nuts.²⁴

Today, Yuma's agricultural sector is a massive contributor to the economies of Yuma County, Arizona, and the United States. Even though only 6% of Yuma County's land is farmed, agriculture constitutes about 14.5% of County GDP.²⁵ Yuma County also outperforms its neighbors: it achieves by far the highest average net farm income per farm and the highest average cash rents for irrigated land among Arizona counties,²⁶ and it ranks first among Arizona counties for sales of vegetables and melons.²⁷ Yuma farmers' consistent overachievement is a testament to their decades of investment amidst severely dry conditions.

Agriculture and agribusiness drives Yuma County's economy beyond on-farm production through indirect and induced multiplier effects, including business-to-business and household-to-business transactions.²⁸ These include, for example, industry coordination to cool, cut, wash, pack, process, store, market, and distribute leafy green vegetables and melons.²⁹ Direct sales of \$2.8

²³ Duval et al., 2025 Yuma Study, at 10.

²⁴ George B. Frisvold & Jyothsna Alta, *Agricultural Economic Water Productivity Differences across Counties in the Colorado River Basin*, 11 HYDROLOGY, no. 8, at 15 (2024), <https://doi.org/10.3390/hydrology11080125>.

²⁵ Duval et al., 2025 Yuma Study, at 18; *see also* Arizona County Agricultural Economy Profiles: Yuma County, AZ (2022), <https://extension.arizona.edu/publication/arizona-county-agricultural-economy-profiles>.

²⁶ Duval et al., 2025 Yuma Study, at 14–15.

²⁷ Ashley Kerna et al., *The Contribution of Arizona's Vegetable and Melon Industry Cluster to the State Economy*, at 15 (Oct. 2016) ("Kerna et al., Vegetable and Melon Industry Cluster"), <https://repository.arizona.edu/handle/10150/678027>.

²⁸ Duval et al., 2025 Yuma Study, at 30; *see also* Kerna et al., *Vegetable and Melon Industry Cluster*, at 11–12; Ashley Bickel et al., *Arizona's Agribusiness System: Contributions to the State Economy, An Economic Contribution Analysis for 2014* (Nov. 2017), <https://repository.arizona.edu/handle/10150/678031>.

²⁹ Kerna et al., *Vegetable and Melon Industry Cluster*, 20–21; Ashley Kerna et al., *Arizona Leafy Greens: Economic Contributions of the Industry Cluster, 2015 Economic Contribution Analysis* 7, 20, 35–43 (Sept. 2017) ("Kerna et al., Leafy Greens"), <https://repository.arizona.edu/handle/10150/678030>.

billion in 2022 from Yuma County supported an additional \$418.8 million in indirect effects and \$636 million in induced effects.³⁰

Combined, Yuma County on-farm agriculture, agribusiness, and university research and related activity generate \$3.9 billion in sales, represent \$1.8 billion in county GDP, and support nearly 18,000 jobs, creating \$1.38 billion in labor income.³¹ Looking more closely at the labor market, agricultural activities alone account for roughly 12,000 Yuma County jobs and over \$530 million in total wages.³² Agricultural support services provide another 7,300 jobs across roughly 135 firms.³³

Yuma agriculture also provides enormous economic value to Arizona. In 2022, Yuma County contributed 56% of Arizona's agricultural GDP and accounted for 29% of Arizona's agricultural cash receipts.³⁴ Yuma's on-farm agriculture and agricultural input suppliers contribute to the Arizona economy \$4.2 billion in sales, \$2.0 billion in gross regional product, and over 18,800 jobs that generated more than \$1.4 billion in labor income.³⁵ Once again, Yuma's on-farm activity creates direct and indirect economic effects, including by providing inputs for a host of statewide industries performing necessary pre- and post-harvest activities to ensure high-quality vegetables and melons reach consumers.³⁶ These coordinated industries include input manufacturing (including fertilizer, farm equipment, and irrigation supply manufacturing), agricultural processing (including milk manufacturers, frozen food manufacturers, and thread mills), and agricultural marketing and distribution (including refrigerated warehousing, wholesaling, and distribution).³⁷

Yuma County farmers also demonstrate their economic and agricultural leadership on the national stage. Yuma County has historically been among the top three most productive counties in the U.S. for leafy green production.³⁸ In 2023, Yuma had the 15th highest average cash rent rate for irrigated agricultural land in the country.³⁹ American consumers nationwide spent \$3.2 billion on Yuma-grown produce in 2022, once again generating significant indirect effects by creating \$715 million in profit margins for food wholesalers, \$1.4 billion in retail margins, and \$39 million in foodservice margins nationwide.⁴⁰ These figures further demonstrate that Yuma's on-farm

³⁰ Duval et al., 2025 Yuma Study, at 32.

³¹ *Id.* at 32–33.

³² *Id.* at 19.

³³ *Id.* at 16.

³⁴ *Id.* at 10, 18.

³⁵ *Id.* at 35.

³⁶ *See* Kerna et al., Vegetable and Melon Industry Cluster, at 12.

³⁷ *See* Ashley Bickel, et al., Arizona's Agribusiness System: Contributions to the State Economy (Nov. 2017) (Executive Summary), <https://repository.arizona.edu/handle/10150/678031>.

³⁸ Kerna et al., Leafy Greens, at 31–33 (noting that in 2012 Yuma County ranked third among U.S. Counties in production of leaf lettuce and second in acreage harvested for spinach).

³⁹ Duval et al., 2025 Yuma Study, at 15.

⁴⁰ *Id.* at 39.

agriculture and agribusiness activity generates significant economic benefits for industries and workers far beyond the county line.

Simply put, Yuma agriculture is too important to ignore. “Yuma is to U.S. vegetable production what Silicon Valley is to computer manufacturing, Seattle is to the aerospace industry, Chicago is to commodities trading, Manhattan is to investment banking, Detroit is to auto manufacturing, and Los Angeles is to the movie and recording industries.”⁴¹ The Yuma County, Arizona, and nationwide economies depend on Yuma farmers, and Yuma farmers depend on the Colorado River. Reclamation must clearly consider these economic realities in the final EIS.

b. Yuma farmers are among the most water-efficient in the country because of their long-term investments in science and technology.

Yuma County farmers deeply understand the importance of the Colorado River, the need to conserve and protect it, and the strictures of the Law of the River and the priority system’s specific allocations to priority rightsholders. To that end, Yuma farmers’ shift in agricultural focus since the 1970s has not only significantly improved their economic productivity, but also their water productivity. The two go hand-in-hand, and Yuma farmers exercise their priority rights to Colorado River water more economically and resourcefully than anyone in the Basin.

Yuma farmers have embraced technology at every turn to improve their water efficiency. In the late 70s and early 80s, investments in irrigation infrastructure, including building concrete-lined canals and 10,600 on-farm water control structures, significantly reduced on-farm water deliveries.⁴² Yuma farmers have only continued to innovate and invest since then. Today, Yuma farmers use laser leveling technology on their fields at least once per year to ensure smooth land grading that reduces hydraulic resistance.⁴³ Concrete turnouts allow large volumes of water to be quickly applied across fields, and farmers have learned how to optimize inlet flow to reduce irrigation time so less water infiltrates the ground below the root zone, including through specialized furrows and optimized basins.⁴⁴ Adopting sprinkler systems in place of furrow irrigation has also led to significant water savings in crop stand establishment.⁴⁵ With these advancements, Yuma farmers achieve water application efficiencies averaging 80–85%.⁴⁶

In conjunction with making significant technological investments, Yuma farmers have specialized in the art of irrigation management—determining when and how much water should be applied.⁴⁷ Hydraulic modeling allows farmers to achieve water-application efficiencies

⁴¹ *Id.* at 19.

⁴² Frisvold et al., *Gravity-Flow Irrigation Lessons from Yuma*, at 12.

⁴³ *Id.* at 15.

⁴⁴ *Id.* at 15.

⁴⁵ *See id.* at 16; Quantitative Assessments of Water and Salt Balance for Cropping Systems in the Lower Colorado River Region 23–24 (Nov. 2023) (citing 2015 Yuma Study), https://desertagsolutions.org/sites/default/files/attachment/Quantitative%20Assessments%20Report%20on%20water%20and%20salt%20balance_eread_0.pdf.

⁴⁶ Frisvold et al., *Gravity-Flow Irrigation Lessons from Yuma*, at 15.

⁴⁷ *Id.* at 16.

approaching 90%.⁴⁸ “Efficient water application requires predictable, constant, and manageable inlet flows.”⁴⁹ Yuma farmers do all that they can to make sure their irrigation systems run predictably and efficiently. And by combining irrigation investment and management with improvements in crop genetics, agronomics, pest management, and tillage, Yuma farmers have significantly increased their crop yields over the past 50 years.⁵⁰

Improvements in irrigation efficiency helped Yuma farmers significantly reduce their water use throughout the 1990s and 2000s,⁵¹ even in the face of significant environmental challenges. For example, in the sandy soil of the Yuma Mesa, Yuma farmers have achieved irrigation efficiencies of about 65% and 55% for citrus and alfalfa, respectively, even though efficiencies for districts on the Mesa have historically averaged less than 40%.⁵² Environmental challenges like the “variation in frequency, speed, and direction of wind in Yuma can significantly distort wetting patterns” that reduce irrigation efficiency, but with a bias toward under-irrigation.⁵³ Yuma soil also contains high salt concentrations that, if left unmanaged, would harm crops and hinder production.⁵⁴ Yuma farmers thus engage in beneficial uses of water that may not be imbedded in standard measures of irrigation efficiency, including salt removal (or “leaching”), climate control, soil preparation, and water harvested in the crop (e.g., water contained in harvested melons, produce, etc.).⁵⁵

Despite these challenges, studies prove that Yuma farmers’ investments in irrigation technology and management techniques have improved their water efficiency. Crop yields continue to rise and crop evapotranspiration has remained about the same, meaning water use efficiency per crop has improved. For example, Yuma growers in 2010 produced 2734 pounds of lettuce per acer per inch of crop evapotranspiration, more than double the value in 1970.⁵⁶ Yuma growers have increased economic water productivity between 9 and 21 times just by using crop rotations.⁵⁷ Today, Yuma farmers boast irrigation efficiencies of 80% to 90%,⁵⁸ and they consistently outperform neighboring Arizona counties. Yuma County has a higher system

⁴⁸ *Id.* at 17.

⁴⁹ *Id.* at 15.

⁵⁰ *Id.* at 20.

⁵¹ *Id.* at 13.

⁵² *Id.* at 17.

⁵³ Quantitative Assessments of Water and Salt Balance for Cropping Systems in the Lower Colorado River Region, at 29.

⁵⁴ See Quantitative Assessments of Water and Salt Balance for Cropping Systems in the Lower Colorado River Region, at 10.

⁵⁵ Frisvold et al., *Gravity-Flow Irrigation Lessons from Yuma*, at 22.

⁵⁶ *Id.* at 20.

⁵⁷ *Id.* at 21.

⁵⁸ Quantitative Assessments of Water and Salt Balance for Cropping Systems in the Lower Colorado River Region, at 42.

irrigation efficiency (consumptive use divided by withdrawals) of 64% than neighboring Arizona counties Mohave and La Paz, at 54% and 51%, respectively.⁵⁹

Yuma agriculture is not just highly productive across all major measures of irrigation productivity—cash rent premiums for irrigated land, economic water productivity, and blue water footprints—but *more* productive than the rest of the Colorado River Basin.⁶⁰ Yuma County has the highest cash rent premiums for irrigated cropland in the entire Basin, averaging over \$692 per acre in 2023, whereas just one other Basin county broke \$300 per acre.⁶¹ In economic water productivity, Yuma County generated \$1,581 in crop sales per AF of water in 2022, compared to a Basin-wide average of \$692 per AF and median of \$176 per AF.⁶² Yuma’s blue water footprint is 0.63, compared to a Basin-wide average of 1.44 and median of 5.67.⁶³ These elite levels of efficiency allowed Yuma County to account for 18% of crop sales in the Basin while consuming just 8% of Basin irrigation water.⁶⁴

Yuma farmers have not sat idly by while the Colorado River has shrunk. They have made the most of their high priority diversion rights by investing in significant technological advancements and improving their irrigation management to put every drop of water diverted to their fields to use. But their economic productivity should not be confused with excess; Yuma farming has grown and transformed the entire agricultural industry as a result of those farmers’ consistent efforts and sacrifices to make their priority rights as productive as possible.

c. Reductions in water delivery would result in less agricultural production and economic harm, not more innovation or efficiencies.

Reduced diversions to Yuma County rightsholders would lead to increased fallowing, less crop production, and reduced economic prosperity for Yuma farmers and the plethora of pre- and post-farm businesses and workers that their on-farm production supports.

“[T]here is, in reality, very little room for additional water savings in [Yuma’s agricultural] sector.”⁶⁵ 97% of the water in Yuma County is used for agriculture, of which 90% comes from surface waters.⁶⁶ Groundwater is a relatively insignificant water source in Yuma County, in part because of contamination issues.⁶⁷ After 60 years of investing in and improving their irrigation systems, Yuma farmers are operating at the bleeding edge of water use efficiency.

⁵⁹ Frisvold & Alta, *supra*, at 3.

⁶⁰ Duval et al., 2025 Yuma Study, at 8, 21–29.

⁶¹ *Id.* at 22.

⁶² *Id.* at 28.

⁶³ *Id.* at 29.

⁶⁴ *Id.* at 28.

⁶⁵ 2015 Yuma Study, at 2.

⁶⁶ Arizona Water Factsheet, Yuma County at 2 (Nov. 2025),

https://wrrc.arizona.edu/sites/default/files/2025-11/Yuma_Factsheet_Factsheet_11_2025.pdf.

⁶⁷ *Id.* at 3.

The Draft EIS assumes that farmers can cut their water usage by forgoing production of the least profitable crops. That is incorrect. Soil health depends on crop rotation, which means that some low-value crops must be planted regardless of whether they are economically profitable on their own. Different crop selections to favor low-water-use crops may not be economically viable either, as those crops may not return enough on investment to justify growing them, even with water savings.

Water reductions to Yuma farmers would not only hinder the direct economic effects of on-farm production, but also the indirect and induced effects benefiting the Yuma County, Arizona, and national economies.⁶⁸ Agricultural producers would face decreased sales, causing negative direct effects of lower net revenues, profit, or income. As a result, those farmers would reduce spending on inputs and labor, decreasing income in post-harvest industries or non-agricultural sectors. Agricultural workers will earn and spend less on consumer goods and services. This would significantly harm rural communities like Yuma, where a large portion of the population works in agriculture and where other county economic sectors rely on spending from agricultural workers.

Perhaps counterintuitively, water cuts in the name of conservation could require *additional* uses of water in Yuma to bring fallowed land back into production later. Specifically, voluntary or involuntary cuts could lead to increased land fallowing, which can cause “increased salinity in the root zone” requiring “pre-irrigation” or leaching “to restore conditions suitable for salt-sensitive crops.”⁶⁹ As noted above, leaching or pre-irrigation is necessary in Yuma, and “[i]nadequate leaching compromises sustainable production.”⁷⁰

Because Yuma County farmers have maximized their irrigation efficiency and productivity, further investment and efficiency gains may have a lesser impact on water efficiency than factors entirely outside farmers’ control, like U.S. immigration policy.⁷¹ Reclamation cannot ignore Yuma farmers’ investments, efficiency, and productivity along with the environmental challenges they face. It must also recognize that predictable water flow and diversions based on the exercise of priority rights are necessary to keep Yuma’s hyper-productive agricultural economy alive and feeding the nation.

⁶⁸ Ashley Bickel et al., Potential Regional Economic Impacts of Water Cutbacks to Irrigated Agriculture (2023), <https://extension.arizona.edu/publication/potential-regional-economic-impacts-water-cutbacks-irrigated-agriculture>.

⁶⁹ Quantitative Assessments of Water and Salt Balance for Cropping Systems in the Lower Colorado River Region, at 43.

⁷⁰ *Id.*; Frisvold et al., *Gravity-Flow Irrigation Lessons from Yuma*, at 14 (noting salt removal is a beneficial use of water).

⁷¹ See Frisvold & Alta, *supra*, at 2.

III. Sound policy requires Reclamation to follow the priority system and consider the impacts of water cuts on rural communities.

The priority system represents two bargains: YCWUA shareholders receive a relatively steady supply of water without any rights to keep excess; low priority users receive a variable supply of water but also the right to keep the excess of Arizona's allocation in years of high supply.

The different categories of users have relied on this bargain: YCWUA shareholders have invested in efficiency, and low priority users have stored water underground. Any reductions below entitlement levels should be voluntary and fully compensated. Involuntary cuts out of order of priority would force higher priority users to bear the burden of reduced deliveries in bad years yet receive none of the benefits in good years. Involuntary cuts would also penalize YCWUA shareholders for their efficiency, creating perverse incentives: the farmers would have been better off without investing in that efficiency technology, hoarding their entitlements through inefficient use, so that they could deploy efficiencies now to absorb shortages. Reclamation should recognize YCWUA's water efficiency and should reward, rather than punish, efficiency.

Alternatively, YCWUA shareholders must be given full "conservation" credit (*see* Draft EIS D-2) for using less than their entitlements.

CONCLUSION

By providing these comments, YCWUA does not waive any rights, claims, or defenses that it may have or that may accrue under any existing federal or state law or administrative rule, regulation, or guideline. Moreover, YCWUA's silence with respect to any particular aspect of the Draft EIS 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. YCWUA reserves the right to provide further comments to Reclamation as appropriate.

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

Sincerely,

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