ATTACHMENT E: STAFF RESPONSE TO PUBLIC COMMENTS

In accordance with California Code of Regulations, title 23, section 3779, subdivision (d), the Colorado River Basin Water Board staff has prepared the following responses to significant environmental issues raised in written comments received during the formal written comment period (October 21–November 22, 2024).

On November 22, 2024, the Board received a comment letter from Rachel Magos, Executive Director of the Imperial Valley Irrigated Lands Coalition (IVILC). No other public comments were received.

IVILC Comments

Comment 1

The Proposed BPA Does Not Adequately Address Mexican Sources of Pyrethroid Loading to the New River and Alamo Rivers:

(1) Require the Colorado River Basin Water Board to evaluate the comparative impact between Mexican sources of pyrethroid loading and Californian.

(2) Revise the timeline target dates to become operative only after the USIBWC's plan to solve for Mexican sources is in place.

Response

The Final Staff Report sets appropriate numeric targets for each of the six pyrethroids (bifenthrin, cyfluthrin, cypermethrin, esfenvalerate, lambda-cyhalothrin, and permethrin) for both water column and sediment to fully address the current pyrethroid impairment in the New and Alamo Rivers. It also includes source analysis and load and wasteload allocations which are set equal to numeric targets, and implements the TMDL via the Colorado River Basin Water Board's Irrigated Lands Regulatory Program and other noted point sources that discharge to the New and Alamo Rivers.

As stated in section 6.2 of the Staff Report, the Colorado River Basin Water Board will coordinate with its federal partners, namely the U.S. International Boundary and Water Commission (USIBWC) and U.S. Environmental Protection Agency (USEPA), to update the relevant treaty minute to ensure that discharges of pyrethroid pesticides into the New River at the International Boundary with Mexico are consistent with California's effluent limits and/or established Total Maximum Daily Load (TMDL) targets. Coordination with our federal partners is essential because Mexico is a sovereign nation and not subject to California water quality regulations. As a result, the implementation plan for controlling pyrethroids loading from Mexico requires coordination with USIBWC and USEPA. IVILC acknowledged as much in their comment letter to the Colorado River Basin Water Board dated November 22, 2024.

The Colorado River Basin Water Board staff will work with its federal partners (USIBWC and USEPA) to develop a mitigation plan. The mitigation plan must outline the proposed measures and implementation methods necessary to ensure that waste discharges entering the U.S. from Mexico do not violate the established TMDLs. The Colorado River Basin Water Board staff continue to acknowledge this source when implementing the TMDL and assessing the effectiveness of management practices implemented by agricultural or other point and non-point sources contributing to pyrethroid concentrations in the water column in the Imperial Valley.

However, regardless of where a pollutant originates, the TMDL must address all potential sources. The Colorado River Basin Water Board cannot absolve one potential source from responsibility simply because there is another source. The goal of this TMDL is to reduce the concentration of pyrethroids in the New and Alamo Rivers which requires addressing all sources contributing to the impairment. The TMDL established for these pollutants fully addresses the current pyrethroid impairment in both the New River and Alamo River. Further, research studies indicate that surface water pollution resulting from current agricultural insecticide use constitutes a substantial threat to aquatic biodiversity, and thus addressing agricultural sources remains paramount in reaching TMDL targets (Schulz et al., PNAS, 2015).

It is important to note that the TMDL and associated numeric targets are concentration-based rather than mass-based. The numeric targets for this TMDL are expressed as maximum load of a specific pollutant that a waterbody can receive each day. Therefore, individual dischargers are evaluated independently based on the concentrations that are measured in their effluent. As described in Section 5 of the Staff Report, the TMDL equation is expressed as:

TMDL = Wasteload Allocations + Load Allocations + Natural Sources + Margin of Safety

Because pyrethroids are synthetic chemicals with no natural sources and the margin of safety is implicit, the TMDLs are essentially only the sum of the respective wasteload and load allocations. The allocations were developed independently as concentration-based values and not based on the assumption of reductions from other nonpoint sources. Since the allocations and targets are concentration-based, each allocation effectively equals the numeric target, and the sources can be considered to function independently.

The Colorado River Basin Water Board proposes a phased implementation approach to ensure effective and adaptive management. The first two years will be used to complete baseline monitoring in areas where pyrethroid concentrations have not been fully characterized, followed by one year for refinement of monitoring plans and adjustment of management practices based on results. Board staff will reevaluate pyrethroid impairment when monitoring data is submitted. If necessary, Board staff will modify the conditions of the operative Irrigated Lands General Order (Waste Discharge Requirements Order R7-2021-0050) to address remaining impairments or allocations to ensure attainment of water quality standards.

Section III.B of the Water Quality Control Plan for the Colorado River Basin Region (Basin Plan) references the qualitative standards of Minute No. 264 of the Mexican-American Water Treaty ("Recommendations for Solution of the New River Border Sanitation Problem at Calexico, California - Mexicali, Baja California Norte"), which was approved by the United States and Mexican governments on December 4, 1980. Minute No. 264 specifies qualitative and quantitative standards for the New River. The monitoring of the New River at Calexico indicated that all the Minute No. 264 specified qualitative and quantitative standards, with the exception of pH, have been violated. The minute as written does not require the discharges from Mexico to comply with California's water quality criteria. Negotiations of updated agreements should include requirements for Mexican dischargers from to comply with the applicable California Water Quality criteria, this will require infrastructure upgrades in Mexico, as the discharge does not currently comply with the limits they have agreed to.

Through their participation in the USIBWC, Board staff is aware of several upgrades that have occurred to the wastewater treatment infrastructure in Mexico. In an effort to address the contamination, the New River Improvement Project (Project) has been implemented in Calexico. The Project aims to improve the water quality of the New River by reducing the transboundary pollution into California. A trash screen has been constructed to intercept solid waste and debris, and the infrastructure is complete to divert the contaminated river flow and replace it with treated wastewater from the city of Calexico Wastewater Treatment Plant (WWTP). The flow from Mexico will be reintroduced to the New River in the area of the Calexico WWTP.

Lastly, as USEPA has emphasized, the development of these TMDLs for six Pyrethroid Pesticides in the Alamo and New Rivers were identified as a "high priority" in the 2026 California Integrated Report staff report.[1] Implementation should therefore not be delayed.

Comment 2

The Standard 5th Percentile Chronic and Acute Criteria for All Six Pyrethroids Should be Used.

Response

This comment has already been addressed in the previous response to comments located in Attachment D of the Staff Report. That response is reproduced below, and will additional justification provided.

> Staff acknowledges IVILC's concerns regarding the potential overprotectiveness of the 1st percentile criteria values for the most sensitive species. Therefore, we have opted to utilize the 2.5th percentile value recommended in the Central Valley Pyrethroid Control Program BPA Staff Report, as that value offers a less stringent but still protective alternative.

[1] State Water Resources Control Board. Draft Staff Report: 2026 California Integrated Report: Surface Water Quality Assessments to Comply With Clean Water Act Sections 303(d) And 305(b)

> Because the 5th percentile criteria may not provide adequate protection to sensitive species, it cannot be used. Instead, the 2.5th percentile criteria have been chosen to ensure protection of sensitive species. The acute and chronic WQC based on the 2.5th percentile are all below the LC_{50} for the most sensitive species, *Hyalella azteca*, indicating their potential to protect this species and others with similar sensitivity.
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> Regarding measurement capabilities, staff acknowledges the current absence of commercial analytical methods capable of reliably detecting pyrethroids at the proposed concentration goals. However, there is ongoing development and enhancement of analytical methods for pyrethroids. In fact, significant improvements have been made in pyrethroid analytical methods over the past decade. Presently, detection limits are nearing the point where determination of compliance with the concentration goals based on the UC Davis 5th percentile criteria is feasible. With the collection of more aqueous concentration data using these improved detection limits, a more precise assessment of water quality standards attainment in the Project Area will be possible.

In response to IVILC's original comment, the Colorado River Basin Water Board revised the requirement to the 2.5th percentile criteria. Further, Colorado River Basin Water Board staff consulted with both State Water Board staff and USEPA to confirm the appropriateness of this change; both agencies concurred.

These TMDLs include an implicit margin of safety through conservative assumptions. Allocations are set equal to the concentration-based loading capacity and do not account for dilution in receiving waters, which likely provides additional safety. The methodology also assumes negligible removal of pyrethroids through degradation or sediment adsorption, although these processes are likely to occur and further reduce concentrations. These conservative assumptions ensure that the TMDLs remains protective of aquatic life. Because the wasteload and load allocations, as well as the numeric targets, are defined on a concentration basis, seasonal variations and critical conditions are inherently addressed. The TMDLs and allocations represent the desired water quality condition under all flow regimes, making seasonally based adjustments unnecessary. Expressing the TMDLs as a concentrations rather than a mass loadings inherently accounts for fluctuations in flow and pollutant loading, ensuring consistent protection across varying environmental conditions.

In addition, an opportunity was given at the Colorado River Basin Water Board hearing on July 9, 2024, for the public and interested parties to comment on the amendment prior to adoption. Staff received no correspondence from IVILC following the written response summarized above or any additional comments before the scheduled Colorado River Basin Water Board hearing. Hence, staff concluded that IVILC had no remaining objections and was in agreement with the revised numeric targets which are as follows:

Numeric Targets and References[2]

Pollutant	Water Column Acute (CMC) and Chronic (CCC) Criterion	Sediment Criterion (µg/g OC; Dry Weight Basis)
Bifenthrin	0.00006 µg/L CMC 0.00001 µg/L CCC WQCR for bifenthrin, Fojut TL et al., 2015	0.43 µg/g OC Amweg et al., 2005; Amweg and Weston, 2007
Cyfluthrin	0.00007 µg/L CMC 0.00001 µg/L CCC WQCR for cyfluthrin, Fojut TL et al., 2015	1.1 µg/g OC Amweg et al., 2005
Cypermethrin	0.00004 µg/L CMC 0.00001 µg/L CCC WQCR for cypermethrin, Fojut TL et al., 2015	0.3 µg/g OC Maund et al., 2002
Esfenvalerate	0.0002 µg/L CMC 0.00003 µg/L CCC WQCR for esfenvalerate, Fojut TL et al., 2015	1.5 µg/g OC Amweg et al., 2005
Lambda-cyhalothrin	0.00003 µg/L CMC 0.00001 µg/L CCC WQCR for lambda-cyhalothrin, Fojut TL et al., 2015	0.44 µg/g OC Amweg et al., 2005
Permethrin	0.006 µg/L CMC 0.001 µg/L CCC WQCR for permethrin, Fojut TL et al., 2015	8.9 µg/g OC Amweg et al., 2005

CCC: Criterion Continuous Concentration CMC: Criterion Maximum Concentration
OC: Organic Carbon

[2] Colorado River Basin Regional Water Quality Control Board. Final Staff Report: TMDL for Pyrethroid Pesticides in Alamo River and New River, Imperial County