

**Public Comments Received and Staff Responses
Regarding a Proposed Amendment to the Water Quality Control Plan
for the Central Coastal Basin To Establish Total Maximum Daily Loads
for Organophosphate Pesticides and Toxicity in the Lower Salinas
River Watershed, Monterey County**

This document presents the public comments received during two public review and comment periods for the proposed Basin Plan amendment, as well as responses provided by Central Coast Water Board staff (staff). The first public comment period was for 45-days, starting November 2, 2023, and ending December 22, 2023. Staff received one public comment letter and subsequently revised the compliance dates associated with the Basin Plan amendment and recirculated the revised Basin Plan amendment documentation for a second round of public review and comment. The second public comment period was for 30-days, starting January 22, 2024, and ending February 23, 2024. Staff received one public comment letter pertaining to compliance dates. Staff are not proposing changes to the Basin Plan amendment based on this second round of public comments.

Public Comment Period 1 (PC1) from November 2 - December 22, 2023. Public Comments Received and Staff Responses:

The following responses to public comments were released to the public on January 22, 2024.

List of Commenters:

1. Theresa Dunham, Kahn, Soares & Conway, LLP on behalf of the Grower-Shipper Association of Central California.

Comments and Staff Responses:

The public comments received are transcribed below in their entirety, including introductory statements, followed by staff responses to each comment.

Public Comment Period 1, Comment 1 (PCP1-1):

On behalf of Grower Shipper Association of the Central Coast, I submit the following comments on the Proposed Basin Plan Amendments for establishment of Total Maximum Daily Loads for Organophosphate Pesticides and Toxicity in the Lower Salinas River Watershed.

Response to Public Comment Period 1, Comment 1 (RPCP1-1) : Comment acknowledged.

PCP1-2:

Our primary comment of concern pertains to the proposed attainment date of 2025. We believe that this proposed date is too short and needs to be revised to allow additional time for achieving compliance with the proposed Load Allocations as they apply to

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irrigated agriculture. We believe that the time for attainment should be at least 10 years from the effective date of the proposed Basin Plan Amendments.

RPCP1-2: Staff revised the attainment date from 2025 to December 31, 2032. This attainment date is consistent with compliance dates already established in the Agricultural Order (General Waste Discharge Requirements (WDRs) for Discharges from Irrigated Lands Order R3-2021-0040)¹ that was adopted April 15, 2021. Staff revised the pertinent sections of the Basin Plan amendment and the TMDL Project Technical Report to reflect this new attainment date. If approved, the Agricultural Order will not require any changes to the existing compliance dates for diazinon and chlorpyrifos.

PCP1-3:

Further, we are concerned that the narrative discussion with respect to compliance schedules may conflict with the State Water Board's precedential order that was adopted in September of 2023, Order WQ 2023-0081. While Grower-Shipper and other agricultural interests disagree with this part of Order WQ 2023-0081, and have challenged it accordingly in the Superior Court of Sacramento, we are concerned that if Order WQ 2023-0081 is upheld, then the compliance schedule language in the Basin Plan could be interpreted as limiting any compliance schedules to 2025. Under Order WQ 2023-0081, arguably then, such schedules could not be revised when incorporated into the WDRs and could only be changed via a Basin Plan Amendment.

RPCP1-3: See RPCP1-2.

PCP1-4

To avoid any uncertainty going forward, we recommend that the attainment date be revised to 10 years from the effective date of the Basin Plan Amendments.

RPCP1-4: See RPC1-2 and RPC1-3.

¹ Agricultural Order website:

https://www.waterboards.ca.gov/centralcoast/water_issues/programs/ilp/regulatory_information.html

Public Comment Period 2 (PCP2) from January 22 – February 23, 2024. Public Comments Received and Staff Responses:

These responses to public comments were released to the public on April 8, 2024.

List of Commenters:

1. Alexander Connors and Chelsea Hsin-Feng Tu on behalf of Monterey Waterkeeper.

Comments and Staff Responses:

The public comments received are transcribed below in their entirety, including all introductory remarks and footnotes contained in the comment letter for completeness. Staff has provided responses following each comment.

Public Comment Period 2, Comment 1 (PCP2-1):

Monterey Waterkeeper appreciates this opportunity to comment on the proposed amendment to the Water Quality Control Plan for the Central Coastal Basin to Establish Total Maximum Daily Loads for Organophosphate Pesticides and Toxicity in the Lower Salinas River Watershed, Monterey County, California (“proposed TMDL project”). Monterey Waterkeeper is a non-profit organization that works to protect and restore fishable, swimmable, and drinkable waters within the Monterey Region and along California’s Central Coast for all to enjoy.

We appreciate that the Central Coast Regional Water Quality Control Board (“Regional Board”) proposes additive toxicity numeric targets for chlorpyrifos, diazinon, and malathion.²

Unfortunately, the Regional Board also proposes to extend the TMDL project compliance date from 2025 to 2032.³

However, the urgency and feasibility of reducing chlorpyrifos and diazinon loading into the lower Salinas River demand an imminent compliance date. Monterey Waterkeeper proposes a 2028 compliance date rather than 2032. We believe 2028 is a realistic compliance date that still maximizes protection for aquatic environments and protects public health.

Response to Public Comment Period 2, Comment 1 (RPCP2-1) : Staff appreciate the thoughtful and well-referenced comments provided by Monterey Waterkeeper. The commenter proposes an earlier compliance date of 2028, rather

² California Regional Water Quality Control Board Central Coast Region (“Regional Board”), [Proposed Amendment to the Water Quality Control Plan for the Central Coastal Basin to Establish Total Maximum Daily Loads for Organophosphate Pesticides and Toxicity in the Lower Salinas River Watershed, Monterey County, California \(Proposed Amendment\)](#) (2024).

³ 2025 is the compliance date stipulated in the chlorpyrifos and diazinon TMDL adopted in 2011. Regional Board, [Lower Salinas River Watershed Chlorpyrifos and Diazinon TMDL](#) (2011).

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than the December 31, 2032, compliance proposed in the Basin Plan amendment documentation.

As background, staff received public comment during an earlier public comment period from November 2, 2023, to December 22, 2023. In response to this earlier public comment, staff revised the TMDL compliance dates for chlorpyrifos and diazinon from 2025 to December 31, 2032, for the following reasons:

- **Consistency:** The December 31, 2032, compliance date is consistent with the TMDL compliance dates for chlorpyrifos and diazinon currently established in the General Waste Discharge Requirements for Discharges from Irrigated Lands, Order R3- 2021-0040 (Agricultural Order) in the lower Salinas River watershed (see Agricultural Order, Table C.3-4).
- **Actions underway to comply with the Agricultural Order:** The majority of the waterbodies in the lower Salinas River watershed are included in the first phase of required Follow-up Surface Receiving Water Implementation and proposed workplans for this work have already been submitted to the Central Coast Water Board for review and approval. These workplans include interim quantifiable milestones and follow-up actions for pollutant source abatement by the 2032 compliance date in the Agricultural Order for chlorpyrifos and diazinon. Establishing an earlier compliance date that deviates from the December 31, 2032, compliance date established in the Agricultural Order would unnecessarily complicate the implementation of follow-up program planning already well underway.
- **Timeliness:** TMDL compliance dates that will be established upon final approval of these TMDLs would not likely be incorporated into the Agricultural Order (and therefore be enforceable) before 2028. The TMDL approval process includes three steps which include adoption by the Central Coast Water Board, approval by the State Water Board, and approval by the Office of Administrative Law. Approval by the State Water Board and Office of Administrative law generally takes between one to two years to complete. Next, the Agricultural Order would need to be modified to incorporate the approved TMDL compliance dates, adding additional time before establishing an effective compliance date. Although the Central Coast Water Board staff are currently revising the Agricultural Order to address remanded items from the State Water Board in Order WQ-2023-0081, staff do not expect that this TMDL approval process will be completed in time to incorporate these TMDLs into that revision of the Agricultural Order. Central Coast Water Board staff do not anticipate modifying the Agricultural Order again before 2028, therefore the timeliness of establishing a 2028 compliance date, as proposed by the commenter, is prohibitive and would not allow the agricultural dischargers adequate time for compliance.

Based on the information presented above staff are not proposing to change the compliance date from December 31, 2032, to 2028.

PCP2-2:

The Regional Board should set a 2028 compliance deadline to maximize protection for aquatic environments that have already been severely impacted by toxic organophosphate pesticides, and to protect public health.

We are encouraged to see that chlorpyrifos and diazinon levels have been significantly reduced since 2008.⁴ However, a reduction is not a reason to postpone the compliance date; indeed, if the compliance date is postponed, organophosphate use might rebound as growers will have less incentive to further reduce organophosphate pesticides.

In 2004 the US EPA outlawed the residential use of diazinon, a powerful neurotoxin. The pesticide had been found to damage the nervous system, especially jeopardizing the health of children.⁵ Diazinon is also highly poisonous to wildlife; a single granule can kill a small bird.⁶ While the residential use of diazinon has been banned, discharges from irrigated agriculture remain a major source of diazinon within the Lower Salinas River watershed.⁷ Diazinon levels in the Lower Salinas River watershed have decreased since 2008, perhaps due in part to the 2025 compliance date adopted in the 2011 TMDL project.⁸ But diazinon use might rebound if the compliance date is postponed.

Chlorpyrifos exposure is associated with long-term harm to children's brain function, including loss of IQ and impaired working memory.⁹ The US EPA has found that 97% of the more than 1,800 animals and plants protected under the Endangered Species Act are likely to be harmed by chlorpyrifos.¹⁰ Residential use of chlorpyrifos was banned in 2000, but as late as 2016 the EPA found that toddlers were still being exposed to the pesticide at levels 140 times greater than what the agency deemed safe.¹¹

In 2021, the EPA revoked all chlorpyrifos tolerances (federally established maximum levels of pesticide residues on food), such that any food or animal feed treated with chlorpyrifos after February 28, 2022 could not be distributed in interstate commerce. But a federal appeals court vacated that rule.¹² Fortunately, since 2021, the California EPA has prohibited growers from possessing or using chlorpyrifos products in the state.¹³ The proposed TMDL project should reinforce this prohibition with an imminent

⁴ Regional Board, [Water Quality Report Card, Chlorpyrifos and Diazinon in the Lower Salinas River Watershed \(Report Card\)](#) (2016).

⁵ Marla Cone, [EPA Takes Pest Killer Diazinon Off the Shelves](#), L.A. Times, Jan. 1, 2005.

⁶ Marla Cone, [EPA Takes Pest Killer Diazinon Off the Shelves](#), L.A. Times, Jan. 1, 2005.

⁷ Regional Board, [Report Card](#) (2016).

⁸ Regional Board, [Report Card](#) (2016).

⁹ Earthjustice, [Poisoned Food, Poisoned Brains](#) (2021).

¹⁰ Center for Biological Diversity, [U.S. Fish and Wildlife Service Sued for Refusing to Stop Chlorpyrifos, Diazinon From Killing Endangered Animals, Plants](#) (2022).

¹¹ Natural Resources Defense Council, [EPA Bans Chlorpyrifos On Food Crops](#) (2022).

¹² United States Environmental Protection Agency, [EPA Update on Next Steps for Chlorpyrifos](#) (2023).

¹³ California Environmental Protection Agency, [Agreement Reached to End Sale of Chlorpyrifos in California by February 2020](#) (2019).

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compliance date, ensuring regulatory consistency. Chlorpyrifos levels in the lower Salinas River watershed have declined since 2008, perhaps due in part to the 2025 compliance date adopted in the 2011 TMDL project, but again this decline is not a reason to postpone the compliance date.¹⁴

If the decrease in chlorpyrifos and diazinon is due in part to the 2025 compliance date adopted in the 2011 TMDL project, then postponing this compliance date until 2032 could undo that recent progress. Given the significant health and environmental effects of these pesticides, it is urgent that the Regional Board set a more ambitious compliance timeline of 2028 to ensure that growers continue to reduce pesticide use and loading into the Lower Salinas River watershed.

RPCP2-2: Please refer to **RPCP2-1** regarding the commenters proposed compliance date of 2028 and the comment that the proposed TMDL project should reinforce the 2021 California EPA prohibition with an imminent compliance date. Specifically, where staff responses describe the timeline to obtain final approval of these TMDLs and establish surface water limits and compliance dates in permits that regulate sources of these pollutants.

Staff agrees that chlorpyrifos and diazinon are harmful chemicals and that their use on crops and concentrations in waterbodies have decreased since 2008. As described in the comment letter, the use of chlorpyrifos and diazinon has been restricted in California. Further, the data assessments in the TMDL Project Technical Report confirm that in recent years, chlorpyrifos and diazinon are very rarely detected above levels of concern in surface receiving waters of the lower Salinas River watershed. Consequently, one waterbody has already been removed from the federal Clean Water Act section 303(d) List of impaired waters and with additional sampling, water quality trends indicate other waterbodies in this watershed will qualify for removal soon.

Chlorpyrifos use is now restricted to the application of granular products which are used on very few central coast vegetable crops. In February 2020, California EPA stated (see footnote 13 above) that these granular products “are not associated with detrimental health effects.”

In the California Department of Pesticide Regulations (CDPR) 2018 reevaluation of diazinon,¹⁵ CDPR concluded that the remaining limited, but allowable, uses of diazinon have sufficient requirements for mitigation measures to reduce ecological risk. Based on the data and information available, staff believe that diazinon application restrictions imposed by U.S. EPA, California EPA, and CDPR for diazinon use, and the relevant Agricultural Order requirements will prevent a resurgence in the use of diazinon between now and the proposed 2032 TMDL compliance date. Specific Agricultural Order requirements that deter increased use of diazinon include 1) the required Follow-up Surface Receiving Water Implementation and establishment of quantifiable milestones for surface receiving

¹⁴ Regional Board, [Report Card](#) (2016).

¹⁵ <https://www.cdpr.ca.gov/docs/registration/canot/2018/ca2018-05.pdf>

waters and diazinon and 2) requirements for Ranch-level Surface Discharge Monitoring and Reporting that can be imposed by the Executive Officer should diazinon exceed the quantifiable milestones in the follow-up program or the water quality limits in the Agricultural Order.

PCP2-3:

A 2028 compliance date for this TMDL project is feasible.

Growers have the ability today to adopt best management practices that will further reduce loading organophosphates into the Lower Salinas River Watershed. Firstly, chlorpyrifos and diazinon levels in the Lower Salinas River watershed have already been drastically reduced since 2008, which demonstrates that growers can use less of these organophosphates and/or adopt best management practices to reduce their loading into the watershed.¹⁶ Secondly, many BMPs can be implemented immediately and at low cost.

The following is a list of BMPs for protecting water resources from agricultural insecticides.^{17 18 19} Growers could adopt many of these highly feasible strategies today.

- Use Integrated Pest Management to determine significance of insect problems and consider all control options.
 - Scout fields to determine populations of pests and beneficial insects. Use thresholds to determine if insect populations warrant an insecticide application. Consult websites on the following page for scouting procedures and thresholds.
 - Use cultural controls such as crop rotation, tillage, and changing harvest or planting schedules to reduce pest populations.
 - Consider biological control options as appropriate.
 - Select insect resistant/tolerant crop varieties well adapted to area growing conditions.
- Use sound agronomic practices to promote crop tolerance to pests.
 - In general, vigorous crop growth improves tolerance to insect pests. Factors such as soil fertility, drainage, soil moisture, and compaction impact crop vigor.
- Avoid weather conditions that result in spray drift.
 - Do not spray if wind speed >10 mph or < 3 mph. Wind speeds < 3 mph can indicate a temperature inversion. Temperature inversions occur during very calm conditions (usually in early morning or late evening) where very little air mixing occurs, and cool air is trapped below warmer air. This can cause small

¹⁶ Regional Board, [Report Card](#) (2016).

¹⁷ Minnesota Department of Agriculture, [Water Quality Best Management Practices for All Agricultural Insecticides](#) (2018).

¹⁸ Minnesota Department of Agriculture, [Water Quality Best Management Practices for Chlorpyrifos](#) (2024).

¹⁹ The University of California, Davis Agricultural GIS (AGI S) Laboratory, [Agricultural Pesticide Best Management Practices Report](#) (2010).

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- spray drops to remain suspended in the air and eventually move out of the treatment area as a concentrated cloud.
- High temperature (>85°F) and low relative humidity (<50%) increases evaporation of spray droplets before they reach their target. Spray droplet size decreases which increases drift potential.
- Properly set up, calibrate, operate, and maintain insecticide application equipment to apply the correct rate.
 - Use the correct spray nozzles, pressure, and boom height to provide uniform coverage and reduce off-target drift. Reducing production of small spray droplets (<250 microns) decreases spray drift potential.
 - Low-drift and air-induction nozzles reduce production of small droplets and are necessary for some insecticide applications. Although wide angle nozzles produce more fine droplets, the reduced boom height generally results in less drift. See Low-drift nozzles.
 - Calibrate sprayers at the beginning and periodically during the season.
 - Calibrate planter insecticide equipment.
 - Maintain spray equipment including checking/replacement of worn nozzles, cracked spray lines, pressure controls, gauges, check valves, agitator, and spray controller.
- Target insecticide to specific areas of crop/field.
 - Use spot spraying, directed sprays, and band applications based on scouting and variation in insect populations. Application method effectiveness depends on the pest involved.
- Rotate insecticide chemistries with different modes of action.
 - Document recent insecticide use.
 - Rotate use of insecticides with different modes of action, such as, synthetic pyrethroids, organophosphates, insect growth regulators, neonicotinoids, microbials, and botanicals.
- Protect surface water, groundwater, and sensitive sites from insecticide drift and runoff.
 - Maintain setbacks/buffers/filter strips for both application and mixing areas to avoid drift or runoff to neighboring property, public areas, water bodies, tile inlets, wells, areas with shallow water tables, and sinkholes.
 - Control erosion to reduce the loss of soil-adsorbed pesticides.
 - Use an anti-siphon device or an air gap when filling sprayers.
- Dispose of unused insecticide properly.
 - Dispose of small amounts of excess insecticide according to label directions.
 - Do NOT pour leftover insecticides down a drain or in a single spot in a field.
 - Utilize MDA Waste Pesticide Collection Program.
 - Unused insecticide treated crop seed can be planted on extra land.

RPCP2-3: Staff agrees that implementation of these management practices are feasible and the Agricultural Order requires dischargers to implement management practices that are protective of water quality. The Agricultural Order also requires growers to maintain records of their management practice implementation and assessment and to report on management practice implementation and assessment in the Annual Compliance Form in the GeoTracker database. The

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above-mentioned Follow-up Surface Receiving Water Implementation program must also include quantifiable milestones and follow-up actions (e.g., management practice implementation and assessment, and where applicable source identification and abatement) to confirm progress towards reducing the discharge of pollutants and ultimately meeting surface receiving water limits by the compliance date. For these reasons and the reasons stated in RPCP2-1 and RPCP2-2, staff is not proposing to change the compliance date to 2028.

PCP2-4: **Conclusion**

The urgency and feasibility of reducing chlorpyrifos and diazinon loading into the lower Salinas River demand an imminent compliance date. Monterey Waterkeeper proposes a 2028 compliance date rather than 2032, to maximize protection for aquatic environments and to protect public health. Thank you for your consideration of our recommendations. If you have any questions, please don't hesitate to contact us. We are happy to have further discussions.

RPCP2-4: See RPCP2-1, RPCP2-2, and RPCP2-3.