



July 11, 2025

Chief Deputy Director Karen Mogus  
State Water Resources Control Board  
1001 "I" Street, 24th Floor  
Sacramento, CA 95812

**RE: Require the Central Valley Third-Party Coalitions to Submit Additional Data Analyses for the Second Statewide Agricultural Expert Panel**

Dear Chief Deputy Director Mogus:

The undersigned groups write to urge the State Water Board (State Board or Board) to require the Central Valley Third-Party Coalitions (Coalitions) to conduct additional analyses ahead of the upcoming Second Statewide Agriculture Expert Panel (Expert Panel or Panel).

The Board posed several important questions<sup>1</sup> to the Expert Panel and has asked the Panel to recommend improvements to the Irrigated Lands Regulatory Program (ILRP) that will protect water quality objectives statewide using data collected pursuant to the 2018 East San Joaquin (ESJ) Order (WQ 2018-0002) and the 2023 Central Coast Order (WQ 2023-0081). We have raised concerns that the November 2024 Analysis of Available Irrigated Lands Regulatory Program Nitrogen Data<sup>2</sup> prepared by the Board for the Panel does not provide sufficient information to answer the assigned questions without forcing Panel members to perform extensive data analyses themselves—and even then, only the Coalitions can answer certain questions due to data anonymity.<sup>3</sup> In this letter, we describe three additional analyses the 13 Third-Party Coalitions must prepare for the Board, Board staff, and the Expert Panel using data the Coalitions have in their possession to help the Panel answer the Board's assigned questions.

We are especially concerned about the inadequate analysis regarding nitrate application and discharge in the Central Valley, among other concerns raised in previous letters to the State Water Board in April and May.<sup>4</sup> Since last November, we have regularly met with Board staff and proposed additional analyses for the Board to either prepare themselves using the 2018 ESJ Order mandated data or to require the Central Valley Third-Party Coalitions to prepare ahead of the Expert Panel's convenings. In questions 1, 2, 5b, and 6 for the Expert Panel, the State Board is asking Panel Members to evaluate:

- Whether Irrigation and Nutrient Management Plan (INMP) data is sufficient to assess reductions in N discharge on an individual grower basis and overall basis;
- What limits can be set to protect water quality; and

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- Whether nitrogen application limits based on percentiles of known grower practices are appropriate.

To effectively answer these questions and estimate the potential impacts of limits, including interim limits, the Expert Panel needs to know the nitrogen (N) discharges associated with various percentiles, both on the basis of individual growers and individual fields, an overview of the number of acres meeting discharge targets within each coalition, and how those acres meeting discharge targets change from year to year. Additionally, aggregating percentile nitrogen surplus or applied minus removed (A-R) values over time allows the Expert Panel to evaluate if the amount of nitrogen surplus associated with the top percentiles of growers and fields is decreasing year after year—an important metric in tracking the ILRP’s progress. Notably, because the Tule Coalition provided their 2023 acreage data, we were able to perform analyses of that data for that year, as shown below in the pie charts. These analyses bear directly on questions 2, 5b, and 6, but they cannot be done for the remaining coalitions without acreage data.

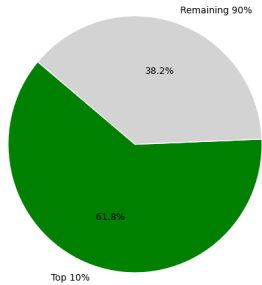
As you continue working with the Central Valley Regional Board and the Coalitions to collect additional data and information for the Expert Panel, we urge the Board to direct each of the 13 Third-Party Coalitions to individually conduct and submit the following three analyses using the required data annually reported by growers in their INMP Summary Reports, including the acreage data already in Coalitions’ possessions. Since we cannot do these analyses without acreage data, we provide step-by-step guidance on how the Coalitions can do the analyses by filtering their existing spreadsheets and calculating and plotting the data using Excel functions. By requiring the Coalitions to perform these additional analyses, the Board can share the results with the Expert Panel and the public while preserving grower-preferred anonymity.

**Analysis #1: N discharge (A-R) aggregated by anonymous member ID, totaled, and broken out by decile (90th, 80th, 70th, etc.) for each year (e.g., 2021, 2022, 2023).** This will show the total A-R discharge per grower and show the Panel which grower IDs are associated with the highest nitrogen discharge rates in the Coalition.

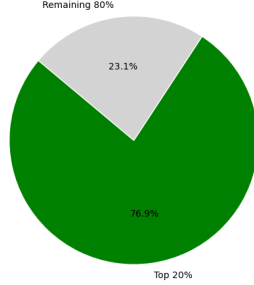
Step-by-step guidance:

1. Filter out negative A-R values
2. Sum all A-R discharges for the coalition to arrive at a total A-R discharge value for that year. This is the total N discharge for the coalition in that year.
3. Multiply anonymous grower acreage by their A-R per acre to get total A-R values per grower. Sum total A-R values by anon. member ID for that year. This is the total N discharge for that grower in that year.
4. Calculate all the A-R value thresholds for each decile (90th, 80th, 70th, etc).
5. Add all A-R values up to each decile and subtract that from the Total N discharge for the coalition in that year. This will show the volume of N discharge for each decile of anonymous member ID.
6. Plot on a pie chart and add percentage values. See below for example pie chart using 2023 data submitted by the Tule Coalition. The pie charts show what proportion of total nitrogen discharges are represented by the discharges from the top 90th, 80th, and 50th percentile of growers (green wedges).

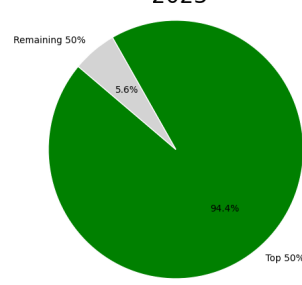
Nitrogen Surplus (A-R) Contribution of the 90th Percentile of Grower ID to Total A-R in Tule Coalition Basin 2023



Nitrogen Surplus (A-R) Contribution of the 80th Percentile of Grower ID to Total A-R in Tule Coalition Basin 2023



Nitrogen Surplus (A-R) Contribution of the 50th Percentile of Grower ID to Total A-R in Tule Coalition Basin 2023

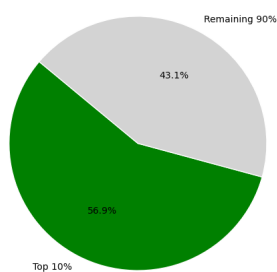


**Analysis #2: N discharge (A-R) aggregated by anonymous Field ID, totaled, and broken out by decile (90th, 80th, 70th, etc.) for each year (e.g., 2021, 2022, 2023).** This will show the fields with the highest nitrogen discharges and allow identification of various degrees of outliers.

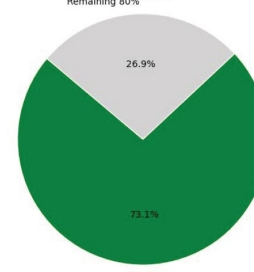
Step-by-step guidance:

1. Filter out negative A-R values
2. Sum all A-R discharges for the coalition to arrive at a total A-R discharge value for that year. This is the total N discharge for the coalition in that year.
3. Multiply Field ID acreage by its A-R per acre to get total A-R value for each Field ID. Sum total A-R values by Field ID for that year. This is the total N discharge for that Field in that year.
4. Calculate all the A-R value thresholds for each decile (90th, 80th, 70th, etc).
5. Add all A-R values up to each decile and subtract that from the Total N discharge for the coalition in that year. This will show the volume of N discharge for each decile of Field ID.
6. Plot on a pie chart and add percentage values. See below for example pie charts using 2023 data submitted by the Tule Coalition. The pie charts show what proportion of total nitrogen discharges are represented by the discharges from the top 90th, 80th, and 50th percentile of fields (green wedges).

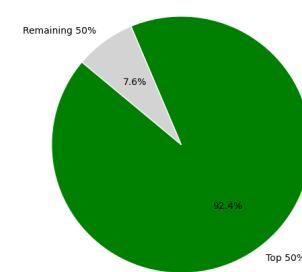
Nitrogen Surplus (A-R) Contribution of the 90th Percentile of Field IDs to Total A-R in Tule Coalition Basin 2023



Nitrogen Surplus (A-R) Contribution of the 80th Percentile of Field IDs to Total A-R in Tule Coalition Basin 2023



Nitrogen Surplus (A-R) Contribution of the 50th Percentile of Field IDs to Total A-R in Tule Coalition Basin 2023



**Analysis #3: Acreage of N discharge (A-R) aggregated and bucketed by discharge levels in 50 lb/acre increments up to >1000 lb/acre for each year (e.g., 2021, 2022, 2023).** This will show how many acres in each coalition are meeting different categories of discharge limits.

Step-by-Step guidance:

1. Filter out negative A-R values.
2. Create bins in 50 lb/acre increments up to >1000 lb/acre.
3. Sort A-R data into bins and sum up the acreage within each bin.
4. Create a barplot showing the number of acres in each A-R discharge bin. The barplot example below is borrowed from the Central Coast Regional Board’s Technical Report on Total Nitrogen Applied (TNA) and Irrigation and Nutrient Management Plan (INMP) Summary Report Data.<sup>5</sup>



The State Board is asking some of California’s foremost nitrogen experts to spend their valuable time addressing significant questions, understanding the ILRP’s impact, and making recommendations regarding nitrate regulation. To set the Panel up for success, the Board and Board staff must ask the Coalitions to prepare and share the above analyses.

Under the ESJ Order and the 2023 Central Coast Agricultural Order, the State Board has the authority and obligation to analyze the A and R data generated by the Central Valley program, with the goal of regulating nitrate pollution and improving the ILRP.<sup>6</sup> The fact that the Board and Board staff cannot perform the analyses listed above for the Expert Panel using the currently submitted datasets (that remove acreage values) means that the State Board has not and cannot audit or verify the Coalition’s calculations. In a subsequent letter, we will outline the Board’s authorities and obligations to request the acreage data in the Coalitions’ possession so the Board, Board staff, and the public can audit the Coalitions’ calculations in compliance with the requirements in the ESJ and 2023 Central Coast Agricultural Orders and simultaneously assist the Expert Panel in answering question 5d posed to them by the Board. Sharing of the acreage data with Board staff and the public will give them the ability to conduct the analyses outlined above, particularly if any of the Coalitions assert they are unable or unwilling to conduct the simple analyses outlined in this letter.

The State Board needs to act with the urgency that the drinking water crisis requires and use its authority to request the additional analyses listed above.

Sincerely,



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Natural Resources Defense Council



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<sup>1</sup> See Questions for the Second Statewide Agricultural Expert Panel here:  
[https://www.waterboards.ca.gov/water\\_issues/programs/agriculture/docs/panelquestions.pdf](https://www.waterboards.ca.gov/water_issues/programs/agriculture/docs/panelquestions.pdf)

<sup>2</sup> November 2024 Analysis of Available Irrigated Lands Regulatory Program Nitrogen Data available here:  
[https://www.waterboards.ca.gov/water\\_issues/programs/agriculture/docs/ilrpdatareport.pdf](https://www.waterboards.ca.gov/water_issues/programs/agriculture/docs/ilrpdatareport.pdf)

<sup>3</sup> And to reiterate, we are not asking for de-anonymization at this time. Rather, we are asking the Coalitions to perform some simple analyses so that the public and the panel can get some of the benefit of the anonymized data without compromising anonymity.

<sup>4</sup> These comment letters are attached in the same email sent to Board staff which include this letter, dated July 11, 2025.

<sup>5</sup> Central Coast Regional Board's Technical Report on Total Nitrogen Applied (TNA) and Irrigation and Nutrient Management Plan (INMP) Summary Report Data is available here:

[https://www.waterboards.ca.gov/centralcoast/water\\_issues/programs/ilp/docs/r3-ar-technical-report.pdf](https://www.waterboards.ca.gov/centralcoast/water_issues/programs/ilp/docs/r3-ar-technical-report.pdf)

<sup>6</sup> See generally, ESJ Order at pp. 73-75, Central Coast Order at p. 19.