



# san joaquin county & DELTA WATER QUALITY COALITION

March 3, 2017

Ms. Ashley Peters  
Central Valley Regional Water Quality Control Board  
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*Sent Via Electronic Mail*

SUBJECT: Final Report of Y-to-N Removed Conversions for Central Valley Crops

Dear Ms. Peters:

Thank you for the opportunity to comment on the “Final Report of Y-to-N Removed Conversions for Central Valley Crops” which includes the report, “Nitrogen Concentrations in Harvested Plant Parts – A Literature Overview”. The literature review performed by Dr. Daniel Geissler from UC Cooperative Extension provides estimates of nitrogen (N) removal from crops across the Central Valley of California.

This report should be considered in the broader context of the Nitrogen Management Plan Technical Advisory Work Group (NMP TAWG). Referencing the December 18, 2015 Crop Nitrogen Knowledge Gap Study Plan submittal, page 1, “The coalitions were cautioned by the experts about utilizing calculators without further review of their appropriateness to calculate and report N removed within the regulatory framework of the ILRP (Irrigated Lands Regulatory Program).”

San Joaquin County and Delta Water Quality Coalition recognizes the usefulness of this report in providing information to educate growers about nitrogen applications and in developing Nitrogen Management Plans on their farms. The available N removed values are NOT intended to be used as regulatory endpoints. The information provided in the report “Nitrogen Concentrations in harvested plant parts – A literature overview” should be used to represent the general relationship of applied and consumed nitrogen so that nitrogen removal by crops can become increasingly understood over time.

The literature review also highlights the number of factors that affect nitrogen concentration in harvested plants as well as the limitations to the quality of the data. It is important to note that the commodities reviewed have a range of values for the N in harvested plant parts. The report characterizes this variation by providing a coefficient of variation (CV) for each commodity (see for example, Tables 1-3 (pages 2-4) of the report). While many of these coefficients of variation are

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relatively small (< 10), a large number of these values are large, and in some cases, very large. For example, the CV for apricots is 114% and there are several commodities with CV's over 30%. The larger values reflect two issues that indicate that these values should not be used as regulatory endpoints; there are very different estimates of N in harvested plant parts in a few samples collected, and a large amount of natural variation in the amount of N in harvested plant parts. The large amount of variation can be the result of studies performed on different varieties, or the same commodity grown under very different climatic, soil, or farming conditions. The critical point in both of these issues is that there is still a great deal of uncertainty in the estimates of N in harvested plant parts and the single value selected in the report may not reflect conditions across the entire Central Valley, or at any location in the Central Valley. These caveats are important in the context of the ILRP and the NMP TAWG efforts.

San Joaquin County and Delta Water Quality Coalition is committed to working with the agricultural industry and scientific community to improve the accuracy of the N removed conversion factors, where appropriate.

Sincerely,



Executive Director  
San Joaquin County and Delta Water Quality Coalition