



Dr. Jean Pierre Wolff, Chair

Re: Irrigated Lands Regulatory Program: Total Nitrogen Applied Data Summary

March 11, 2016

Dear Chairman Wolff,

We thank staff for taking the time to share with us the presentation which will be given at the Central Coast's Board meeting on March 18th. We applaud the analysis of the data collected by the Irrigated Lands Regulatory Program (ILRP), and believe it is a vital foundation to better inform an effective regulatory structure both in the Central Coast region and throughout the state.

The Central Coast Regional Water Board, through its Irrigated Lands Regulatory Program Order, has collected valuable data on the application of nitrates onto cropland. This data is significant as it shows the negative impacts that over-application of nitrate-laden fertilizer and irrigation water has on soils and groundwater basins. Herein lies huge implications which can be applied across the state. For the first time we can see the magnitude of the impact of ongoing nitrate loading on groundwater basins and on the beneficial uses and users that rely on those basins.

We believe this data provides clear direction to the Board on needed next steps in the implementation of the ILRP:

- The data provided likely underestimates actual patterns of nitrogen fertilizer application so we would like to see expanded data requirements for nitrogen loading to agricultural lands in all regulatory tiers, including growers who temporarily rent acreage to plant crops;
- Require implementation of more stringent best management practices;
- Direct enforcement actions against growers whose applied nitrogen exceeds the median use of growers with similar crops;
- Order the provision of replacement water for wells exceeding the drinking water standards for nitrate in the vicinity of farms applying nitrogen well above crop uptake levels.

One category of growers which is not currently represented by the Order is short-term operators. These operators will rent acreage to plant a specific crop and have no incentive to implement best management practices in order to protect the soils or water since by the next grow season they have

moved onto a new plot. The Board should keep track of these short-term operators and monitor the level of fertilizer and nitrogen-laden water applied to whichever lands the grower is using to determine patterns in the grower's practices across locations. We suggest steps should be taken, perhaps in the next Agricultural Waiver, to ensure that the data collected is representative of all categories of growers, both long and short term operators.

Furthermore, the data provided by staff only represents agricultural lands in the most vulnerable areas. We recommend that the Board expand its data requirement to include data and information from nitrate loading on all irrigated agricultural lands. The preliminary data demonstrates the need for an expanded effort to collect data on nitrogen loading in order to obtain a more complete picture of the impact irrigated agriculture has upon the State's valuable groundwater basins.

The data currently accessible shows that agricultural producers continue to apply fertilizer far in excess of what is necessary and what the crops are capable of capturing through uptake. It seems that farmers are not incorporating the nitrogen level in their irrigation water into their calculation of necessary fertilizer application. While this will appear to farmers to represent an unnecessary cost, their actions create more serious consequences for nearby communities. The people who are paying for this contamination are not those who cause the contamination, but the communities who depend upon the aquifers impacted by irresponsible management practices for all domestic uses. These communities suffer numerous health problems and face numerous health risks, including gastronomic, child development issues, blue baby syndrome, skin rashes, and many other conditions, all from either consuming or even washing themselves with this water. Due to contaminated supplies, residents in these communities spend a higher percentage of their income on water than the average Californian. Residents pay water bills for water which is not usable, and then must also purchase bottled water for everything from drinking, food preparation, and sanitary purposes. This is not acceptable. There is no reason that communities should be bearing the burden of groundwater contamination.

We think it is imperative that the Board require stronger and more protective management practices in the near term. We understand that cleanup of these contaminated basins is a long-term effort, and that is why we urge the Regional and State Water Boards to commence enforcement actions against those responsible for continuing groundwater contamination. As evidenced by the data collected by the Central Coast Board, there are growers who apply fertilizer at a much higher rate than other farmers growing the same crops, especially when the additional nitrogen in irrigation water is considered. These bad actors should have to pay for replacement water for communities impacted by poor management practices which lead to the contamination of groundwater basins necessary for drinking water and other domestic uses. In the recent Draft Eastern San Joaquin Irrigated Lands Regulatory Program Order, State Board staff included a mention that those responsible for the contamination of drinking water supplies should be expected to pay for replacement water. While this is not currently a regulatory requirement it should, at a minimum, be considered a guiding principle for Regional and State Board staff when looking at issues which can be remedied through enforcement actions.

Best management practices must be developed, implemented and enforced to protect groundwater sources and secure the eventual rehabilitation of impacted groundwater basins. Those goals will not be realized unless there are performance targets which are linked to water quality objectives. Porter-

Cologne provides the structure for meeting water quality objectives and so the Order should refer to the Porter Cologne Act when developing best management practices which will benefit the health of the basin and all who rely on the basin, whether it is for domestic use or for irrigated agriculture.

When creating new best management practices, one issue constantly rises to the top, and that is the need for consistent, accurate data. Without accurate data it is not possible to fully understand the impacts current agricultural practices have on the land. We are concerned that despite the fact the regulations require accurate accounting of nitrate loading, there is no requirement that growers have the tools necessary to properly take these measurements. Without the necessary equipment growers cannot obtain accurate accounting of nitrogen applied and removed from the fields. The Board should consider clarifying that the Order implicitly requires that growers have these tools so annual reports represent the real ratios of nitrogen applied versus removed. Including more stringent requirements focused upon accessing the best data available is in the grower's best interest as well. The continued over application of nitrogen to crops creates ever increasing concentrations of nitrates in the groundwater. While some crops can use water which is not suitable for domestic uses due to higher levels of nitrates, there is an upper limit to that concentration for all crops. Furthermore, continued over application of nitrates and salts can lead to soils which are not fit to grow most crops. Growers should be concerned about protecting their most important resources and they should be given the tools and knowledge necessary to safeguard these resources.

Again, we are encouraged by the efforts by staff to collect valuable data on nitrate application, and hope that this is the start of an expanded effort to understand the full extent of nitrate impacts on groundwater.

Thank you,

Debi Ores
Attorney & Legislative Advocate
Community Water Center

Colin Bailey, J.D.
Executive Director
The Environmental Justice Coalition for Water

Phoebe Seaton
Co-Director and Attorney at Law
Leadership Counsel for Justice and Accountability

Jennifer Clary
Water Program Manager
Clean Water Action