Central Coast Water Quality Preservation, Inc.

P.O. Box 1049 Watsonville, CA 95077 (831) 761-8644 Fax (831) 761-8695 e-mail kschmidt@ccwqp.org

August 6, 2014

Filed via email <u>commentletters@waterboards.ca.gov</u>



Agricultural Expert Panel c/o Jeanine Townsend, Clerk to the Board State Water Resources Control Board 1001 I Street, 24th Floor Sacramento, CA 95814

Re: Draft Conclusion of the Ag Expert Panel

Expert Panel;

Central Coast Water Quality Preservation, Inc. (CCWQP) manages the Cooperative Surface Water Monitoring Program (CMP) for Central Coast farmers in compliance with the CCRWQCB Ag Order. The Central Coast RWQCB Ag Order requires all irrigated farmers to enroll directly with the Regional Board. Growers are required to either participate in a cooperative surface water monitoring program or conduct their own monitoring program, which could cost over ten times as much as the cooperative program. 98% of central coast farm operators, about 1,800, have elected to participate in the CMP, representing 400,000 irrigated acres, over 99% of the irrigated land.

CCWQP submits the following comments and suggestions regarding the Draft Conclusion of the Agricultural Expert Panel:

- Surface Water (pg. 35): The Central Coast CMP monitors at over 50 public access sites in downstream areas of predominantly agricultural sub-watersheds in Region 3 for nine years, similar to the Draft proposal. We have also conducted upstream monitoring above our monthly sites in order to further clarify the sources of impairment. This was satisfactory, but again was limited to public access sites.
 - Recommendation: Growers not be required to conduct individual monitoring of their fields unless prior secondary upstream sampling identifies that field as a possible significant contributing source of the impairment. This sampling could also be conducted by the coalition, with the consent of the grower.

- 2) Mandatory Education (pg. 24 29): The proposals for mandatory education is very well thought out and would be a game changer for many growers. Farmers in Region 3 have long urged mandatory education as the best method of reducing impaired discharge. The initial Ag Waiver included mandatory, although generic, education. The current CCRWQCB Ag Order eliminated education in favor of voluminous reporting.
- 3) **Coalition model:** Throughout the Draft Report there is an assumption of a coalition as an interface between the Regional Board and the growers. Coalitions are tasked with monitoring, attempting to assist the grower to determine if the nitrogen needs of the crop being managed in a reasonably good manner and determining risk levels which may be assigned to areas within the coalition boundary. Coalitions, significantly are tasked to "define a process/procedure that than can use to identify the location of the source of water quality impairment" (pg. 21) and reporting to Regional Boards. (pg. 32)

The Central Valley has used coalitions as part of the ILRP for years. There are no similar existing coalitions for the Central Coast. Other Regional Boards have not adopted the Central Valley coalition approach. The Draft Report finds "the current regulatory approach requires the regulated community to carry our enormous data collection and investigative efforts with questionable utility and no indication that they will be successful in protecting groundwater quality" (pg. 16). Just tracking the; 1) education, 2) irrigation and nitrogen management plans and 3) concise reporting of the new paradigm will be a monumental task for a new coalition to undertake.

- Recommendation: A suggested hierarchy of tasks to be undertaken by a new coalition would provide guidance to Regional Boards and growers for prioritization if new coalitions are formed. Enrolling all new members, setting up a database and establishing relations with the Regional Board must take place before establishing a format for reports from growers, much less creating a method to determine if every member is meeting their education, management plan and reporting objectives.
- 4) Concentration v Load (pg. 13): The statement "an increase in nitrate concentrations at the very upper surface of an aquifer may indicate better nitrate management rather than poorer nitrate management. …" is truly appreciated. Too often the regulatory approach taken by Water Board staff is to use concentration as a proxy for load, which is seldom the case. Concentration alone, without reference to flow, or load, does not readily reflect improved management practices and reduced fertilizer usage.
- 5) **Tile Drains:** The Expert Panel had several questions regarding why tile drains should be uniquely considered during oral comments at the Sacramento meeting on July 18, 2014.

The Draft states:

"Collecting data on changing nitrate levels in the groundwater, to indicate success or failure of on-surface N management practices, is problematic at best. While there is no doubt that with shallow water tables (e.g., less than 7 feet) there will be a rapid response to deep percolation (below the root zone) water and nitrate flows, it becomes almost impossible to get good numbers from deeper zones. (pg. 7)

This may lead one to conclude that there may be a rapid response in discharge from tile drains which are located in the top 8 feet of the field. A USGS study concluded that tile drains do not necessarily collect the most recent recharged water.

"Tile drainwater is subsurface water and, under some conditions, may provide an indication of the quality of shallow ground water. However, the chemistry of a tiledrainwater sample may be different from that of a sample collected from an observation well drilled to the same depth because of preferential flow paths of water to tile drains. *Tile drains do not necessarily collect the most recently recharged water, but depending* on the local hydrology, may collect a combination of recently recharged and older ground water (Deverel and others, 1989)." [Pesticides in Surface and Ground Water of the San Joaquin-Tulare Basins, California: Analysis of Available Data, 1966 Through 1992, Joseph L. Domagalski, U.S. Geological Survey Water-Supply Paper 2468 emphasis added))

For example, tile drains in the lower Salinas Valley, between Salinas and Monterey Bay are not merely poorly drained soils but are farm fields reclaimed from extensive wetlands, from salt marsh to freshwater lakes, over one hundred years ago. Much of the first encountered water extends from the bottom of the tile drains down, up to 60 feet, to the Salinas Valley aquitard. (see figure below, area highlighted in red)



(Kennedy/Jenks, MCWRA, May 2004)

Water samples collected from a tile drain from a field that was fallow for two months resulted in concentrations of: nitrate (as NO3) 360 mg/L; Chloride (as Cl) 430 mg/L and Sodium 480 mg/L, which were all higher than when the field was farmed, and irrigated. These very high levels of impairment from a fallow field reflect historical background levels and not just recent management practices.

Recommendation: It is important to protect aquifers which may provide domestic water from nitrate impairment. The first encountered water found in tile drains was never used as an aquifer, due to its high historical salt content. Best management practices should be used in fields with tile drains to fine tune N usage during the irrigation season, which may in the long term reduce N discharge to surface water from tile drains, but it should not be regulated as a discharge to groundwater as the aquitard below the first encountered water protects the true aquifer from impairment.

Thank you for the opportunity to comment on the Draft Report. Please contact me if you have any questions regarding the above.

Sincerely Central Coast Water Quality Preservation, Inc.

They Flert

Kirk F. Schmidt Executive Director

CCWQP Expert Panel 8-6-14.docx