

**Comments on
CVRWQCB staff Report
January 27/28 Board Meeting**

Submitted by
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I have provided several sets of comments on the deficiencies in the draft and final Ag Waiver water quality monitoring requirements adopted in July 2003. These comments include,

Lee, G. F., "Comments on SWRCB January 9, 2004 Review of Irrigated Agriculture Waiver Water Quality Monitoring Requirements," Comments submitted to the California State Water Resources Control Board by G. Fred Lee & Associates, El Macero, CA, January 19 (2004). <http://www.gfredlee.com/AgWaiverComments1-19-04.pdf>

In these comments I have pointed out that the proposed and adopted nutrient monitoring in the Ag Waiver Program is deficient in providing the necessary data to begin to properly evaluate nutrient concentration data impacts. The current Ag Waiver monitoring program Phase II states for nutrients, "**Nutrients: Total Kjeldahl Nitrogen, Phosphorus and Potassium.**"

The recently released CVRWQCB Staff Report "DISCUSSION OF POTENTIAL REVISIONS TO THE IRRIGATED LANDS CONDITIONAL WAIVERS 27/28 January 2005" states,

"Monitoring and Reporting Program

Regional Board staff propose changes to Monitoring and Reporting Program (MRP) Section 4 "Minimum Requirements." A number of comments received in July 2003 suggesting revision of reporting units for the physical parameters and drinking water constituents and changes in nutrients requirements so as to follow Standard Methods. Staff recommend changing the unit of reporting for Color to Color Unit and for E coli to MPN/ 100 ml and changing Phosphorus to Ortho Phosphate and TKN to Nitrate and Nitrite."

With respect to the Staff Report proposed changes in Phase II nutrient monitoring, the proposed addition of nitrate/nitrite is appropriate. As I have discussed, both can be important sources of nutrients in aquatic systems that can lead to excessive fertilization of waterbodies.

The proposed deletion of Kjeldahl N measurements is inappropriate since some of the organic N measured in the Kjeldahl N test is a nutrient, that through ammonification, leads to ammonia which is a nutrient.

The failure to include ammonia as a measured parameter is a significant deficiency in the original and now proposed Ag Waiver nutrient monitoring program. Ammonia is a parameter that should be measured since it is used as a fertilizer on ag fields, is a nutrient, toxicant and a source of oxygen demand.

The addition of soluble ortho P is appropriate. However, the proposed deletion of Total P is inappropriate since part of the Total P is a nutrient that must be considered in making a nutrient impact evaluation.

As discussed in my previous comments monitoring potassium is a waste of funds since it is not a nutrient in aquatic systems and does not cause other water quality problems.

The proposed change for Color to Color Unit and for E coli to MPN/100 ml is appropriate.

Dr. Anne Jones-Lee and I have prepared a set of PowerPoint slides for presentations to an SJR agricultural group and UC farm advisors on Nutrient TMDLs and BMPs. This presentation,

Lee, G. F. and Jones-Lee, A., "Nutrient TMDLs and BMPs" PowerPoint slide presentation to the UC Agricultural Extension farm advisors and researchers, Woodland, CA (2005). <http://www.members.aol.com/annejlee/FarmAdvisorsWoodland.pdf>

provides information on the approach that will need to be followed to interpret nutrient data collected in the Ag Waiver water quality monitoring program with respect to violations of the CVRWQCB Basin Plan objective for Biostimulatory Substances. These slides as well several other papers and reports devoted to assessing the impact of nutrients, and management are available on our website, www.gfredlee.com in Excessive Fertilization/Eutrophication section.

Recently Dr. Anne Jones-Lee and I have prepared an annotated bibliography of our publications that provide information that is pertinent to the development and implementation of the Ag Waiver water quality evaluation and management program. This report,

Lee, G. F., and Jones-Lee, A., "Background Information on Evaluating the Water Quality Impacts of Irrigated Agricultural Discharges/Runoff" report of G. Fred Lee & Associates, El Macero, CA (2004)
<http://www.members.aol.com/annejlee/BG-WQImp-IrrigAg.pdf>

provides a listing of our papers and reports and a short description of the content of each publication.

If there are questions or comments on these comments and publications please contact me. G. Fred Lee