

## **G. Fred Lee & Associates**

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Via email: [laudonl@swrcb.ca.gov](mailto:laudonl@swrcb.ca.gov), [roblesd@swrcb.ca.gov](mailto:roblesd@swrcb.ca.gov)

Leslie Laudon  
Diana Robles  
SWRCB Division of Financial Assistance

### **Comments on AWQGP Stakeholder Workshop**

Dear Leslie and Diana:

As a followup to the March 8, 2004, Agricultural Water Quality Grant Program Stakeholder Workshop, I want to bring to your attention some of the problems I see with using the funding available through Propositions 40 and 50 to gain the maximum return for the dollars available to work toward solving the water quality problems caused by irrigated agriculture in the State. From what I heard at the workshop, it appears that there will be a major disconnect between when the proposals for funding under the AWQGP will have to be submitted next fall and when sufficient data will be available to properly characterize the major water quality problems in the Central Valley (and, for that matter, elsewhere in the State) caused by irrigated agriculture stormwater runoff and tailwater/subsurface drain water discharges.

#### **Disconnect between Ag Runoff Problem Definition and AWQGP Funding Schedule**

From the information provided at the workshop, if the various coalition groups and other agricultural interests start their ag waiver monitoring this summer as currently scheduled, they will have only a couple of months of data before they will have to file an application for AWQGP funding. While there is a fairly good understanding by some of potential water quality problems in the main stem rivers and major tributaries of the Central Valley, there is very little understanding of water quality problems throughout the watersheds that contribute to these rivers. At the end of the first year of monitoring, some of the problems on the main stems and major tributaries will be better defined; however, the way the ag waiver monitoring program is set up by the CVRWQCB, there is no requirement that tributary watershed monitoring be conducted during this first year for all of the constituents that should be monitored in the first year. This would not take place until the second or third year.

Further, a number of the parameters that were listed on the workshop "Exercise #2" as "Pollutants Produced by Irrigated Ag Lands" cannot be defined as problem areas based on exceedance of a water quality objective for at least three to five years. For example, there are no numeric water quality objectives for sediment or nutrients. This means that site-specific studies, likely involving several years, will have to be conducted to develop the information needed to

properly implement a narrative water quality objective for these constituents. Further, while nutrients were specifically delineated as a constituent of concern, which prompted the ag waiver monitoring program, the CVRWQCB did not include nitrate in the minimum monitoring program.

Your Exercise #2, Pollutants Produced by Irrigated Ag Lands did not list total organic carbon (TOC), which leads to one of the most important problems in the Central Valley caused by irrigated agricultural land runoff/discharges. TOC is of concern in Delta waters since the concentrations exported from the Delta to domestic water utilities exceed US EPA guidelines to limit trihalomethanes (THMs) in their treated waters. If the Southern California and Bay Area water utilities can achieve source control of TOC, they can reduce the cost of water treatment. The drinking water utilities that export water from the Delta are working with CALFED/CBDA and the CVRWQCB in trying to achieve a water quality objective for TOC. The purpose of this effort is to try to get TOC discharges from irrigated agriculture and urban areas reduced. This could readily become one of the (if not the) most important water quality problems in the Central Valley because of the difficulty in controlling TOC in irrigated agriculture stormwater runoff and urban stormwater and wastewater discharges.

It will be very important for your group to understand and correct the disconnect between the current proposed approach for requesting proposals for AWQGP funding and when the water quality problems caused by irrigated agriculture in the State are properly defined based on exceedances of chemical-specific and numeric water quality objectives.

### **Participation of the Environmental Community**

Another issue that was not discussed at the workshop is the importance of allocating some of the AWQGP funds available to support environmental groups' participation in developing programs and reviewing irrigated agriculture water quality investigation and management programs. The issue of the impacts of irrigated agriculture on water quality arose from environmental groups' concern about the lack of regulation of irrigated agricultural runoff/discharges and the finding of widespread water quality problems caused by these discharges. It will be important that the environmental groups be active participants in guiding the AWQGP funding to address issues of concern to the public. In order to be participants, environmental groups will need financial support. Failure to provide this support will leave them with no alternative but to participate on an adversarial basis, discussing the failure of the AWQGP to address their concerns.

### **Background to Comments**

Beginning in the spring of 2003, when the first details of the then-proposed minimum monitoring program were released by the CVRWQCB, I provided comments on what the obvious deficiencies were in this program in carrying out the objectives established by the CVRWQCB for the program. Somewhat to my surprise, even though everyone with whom I have discussed this matter agrees that my comments on the deficiencies in the monitoring program are appropriate, in July 2003 the CVRWQCB adopted this significantly deficient monitoring program largely without change. This was then upheld in January 2004 by the State Board as a credible program. Attached is a set of comments that I submitted last January to Chairman Baggett on the deficiencies in this program in providing the information needed to begin to gather the data needed to implement the ag waiver management program. In December 2003 I

had provided detailed comments on these deficiencies. The State Board chose to ignore my comments and proceeded with what is obviously a technically deficient ag waiver monitoring program, compared to the program needed to accomplish the objectives of the CVRWQCB ag waiver program.

This situation will have a significant adverse impact on the ability of the over \$20 million in AWQGP funding that you are charged with administering to be directed to the most important problems, since a number of these problems will not even be reliably defined by the time the funds have been spent. Based on my experience, it is highly unlikely that irrigated agriculture in the Central Valley or elsewhere will accept that there are water quality problems that need to be controlled until there is an adequate database that shows that there is a clear violation of a water quality objective. Once the violation has been found, then the agricultural community can start to investigate management practices that will address the violation. Unless the situation is significantly changed in the near future, the funding that is available is not mated to water quality problem definition and solution.

I have invested a lot of time and support into defining water quality problems in the Central Valley caused by irrigated agriculture runoff/discharges. The findings were published in the December 2002 reports that Dr. Anne Jones-Lee (my wife) and I completed for the CVRWQCB. These reports,

Lee, G. F. and Jones-Lee, A., "Issues in Developing a Water Quality Monitoring Program for Evaluation of the Water Quality - Beneficial Use Impacts of Stormwater Runoff and Irrigation Water Discharges from Irrigated Agriculture in the Central Valley, CA," California Water Institute Report TP 02-07 to the California Water Resources Control Board/ Central Valley Regional Water Quality Control Board, 157 pp, California State University Fresno, Fresno, CA, December (2002).  
<http://www.gfredlee.com/Agwaivermonitoring-dec.pdf>

Lee, G. F. and Jones-Lee, A., "Review of Management Practices for Controlling the Water Quality Impacts of Potential Pollutants in Irrigated Agriculture Stormwater Runoff and Tailwater Discharges," California Water Institute Report TP 02-05 to California Water Resources Control Board/Central Valley Regional Water Quality Control Board, 128 pp, California State University Fresno, Fresno, CA, December (2002).  
[http://www.gfredlee.com/BMP\\_Rpt.pdf](http://www.gfredlee.com/BMP_Rpt.pdf)

Lee, G. F. and Jones-Lee, A., "Organochlorine Pesticide, PCB and Dioxin/Furan Excessive Bioaccumulation Management Guidance," California Water Institute Report TP 02-06 to the California Water Resources Control Board/Central Valley Regional Water Quality Control Board, 170 pp, California State University Fresno, Fresno, CA, December (2002). <http://www.gfredlee.com/OCITMDLRpt12-11-02.pdf>

Lee, G. F. and Jones-Lee, A., "City of Stockton Mosher Slough and Five Mile Slough Diazinon and Chlorpyrifos Aquatic Life Toxicity Management Report," California Water Institute Report TP 02-08 to the California State Water Resources Control Board/Central

Valley Regional Water Quality Control Board, 44 pp, California State University Fresno, Fresno, CA, December (2002). <http://www.gfredlee.com/StockDiaTMDL12-14-02.pdf>

cover developing a credible ag waiver runoff/discharge nonpoint source water quality monitoring program, an assessment of the current state of understanding of management practices as applied to irrigated agriculture in the Central Valley, excessive bioaccumulation of organochlorine legacy pesticides and PCBs in Central Valley waterbody fish, and developing a TMDL guidance for pesticide-caused toxicity in city of Stockton waterbodies.

Further, during the mid- to late 1990s, Dr. Jones-Lee and I conducted about half a million dollars of studies, in cooperation with the Santa Ana Regional Water Quality Control Board, on stormwater runoff water quality impacts in the Orange County Upper Newport Bay watershed. These reports are available from our website, [www.gfredlee.com](http://www.gfredlee.com). They cover pesticide-caused aquatic life toxicity, organochlorine legacy pesticides and PCBs, heavy metals and salts. In addition, we were co-authors of a synthesis report covering four years of studies of the San Joaquin River watershed and its impact on the low-DO problem in the San Joaquin River Deep Water Ship Channel near Stockton. This report is also on our website:

Lee, G. F. and Jones-Lee, A., "Synthesis and Discussion of Findings on the Causes and Factors Influencing Low DO in the San Joaquin River Deep Water Ship Channel Near Stockton, CA: Including 2002 Data," Report Submitted to SJR DO TMDL Steering Committee and CALFED Bay-Delta Program, G. Fred Lee & Associates, El Macero, CA, March (2003). <http://www.gfredlee.com/SynthesisRpt3-21-03.pdf>

In the fall 2002 I was invited to present a review of existing and potential water quality problems in the San Joaquin River watershed. This resulted in a paper,

Lee, G. F. and Jones-Lee, A., "An Integrated Approach for TMDL Development for Agricultural Stormwater Runoff, Tailwater Releases and Subsurface Drain Water," Proc. 2002 Water Management Conference, "Helping Irrigated Agriculture Adjust to TMDLs," pp. 161-172, US Committee on Irrigation and Drainage, Denver, CO, October (2002). [http://www.gfredlee.com/tmdl\\_07.2002.pdf](http://www.gfredlee.com/tmdl_07.2002.pdf)

Further, Dr. Jones-Lee and I, in support of the DeltaKeeper's activities, are just completing an about 60-page report on Delta water quality issues, where we discuss what is known and what needs to be done to better define water quality impacts of tributary river discharges to the Delta and irrigated agriculture within the Delta. I have also been involved in the Sacramento River Watershed Program (SRWP) in support of the CVRWQCB over the past 10 years, where I have helped shape the water quality monitoring program conducted by the SRWP. Our reports associated with this activity are available from our website, [www.gfredlee.com](http://www.gfredlee.com), in the Watershed Studies, Sacramento River Watershed Program section.

These reports provide a large amount of information that should be considered in managing the water quality problems caused by irrigated agriculture in the Central Valley and in Orange County. If you or any of your associates review any of them and have questions or comments, please contact me. Our work in the Central Valley and in Orange County over the past 15 years,

as well as some work in the San Diego and Los Angeles areas, has given us a good background understanding of many of the agriculturally caused water quality problems in the State. If you or others in your group encounter situations where there are technical questions that I can readily answer, such as in a telephone call, please feel free to contact me.

Fred

G. Fred Lee, PhD, DEE

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