

# **Regulation of Aquatic Life Toxicity as an Issue for CVRWQCB Basin Plan Review**

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Dear Jerry:

In connection with the request for comments on the issues that should be considered as part of the Central Valley Regional Water Quality Control Board's revisions of the Basin Plan, I wish to suggest that the regulation of aquatic life toxicity be examined as part of this Basin Plan review. There is probably no topic of greater overall importance to the CVRWQCB than this topic. Aquatic life toxicity within the CVRWQCB's area of responsibility is one of the most important, if not the most important, potentially significant water quality problems within the region. The widespread, frequent toxicity of many of the waters in the region, particularly associated with stormwater runoff events as well as some irrigation return flows, could be causing significant water quality use impairments throughout most of the region. If this toxicity were due to the discharges of municipal or industrial wastewaters, it would have to be controlled at the point of discharge. Since it is part of stormwater runoff or agricultural irrigation wastewaters and since it is due at least in part to organophosphate pesticides, it is not being regulated under the current Basin Plan requirements of no toxics in toxic amounts. The Basin Plan needs to be revised to reflect this situation.

As it stands now, at least for agriculturally-derived OP pesticide toxicity, regulation is initially covered under the DPR - WRCB MAA. It is unclear, however, whether that MAA also covers urban stormwater runoff OP pesticide toxicity. In connection with the BPTCP review, DPR admitted that it is not addressing this issue. Clearly this issue must be addressed since urban stormwater runoff is toxic to certain forms of zooplankton with

each runoff event. The CVRWQCB needs to develop a regulatory approach that will be implemented for urban stormwater runoff-associated toxicity. Further, this approach would be implemented when the DPR under the MAA fails to control the toxicity associated with ag stormwater runoff and irrigation return water within the next three years.

The key issue that needs to be addressed with the OP pesticide aquatic life toxicity is the water quality and ecological significance of pulses of toxicity that apparently affect only a limited number of aquatic organism types such as *Ceriodaphnia* and mysids. At this time, the full range of toxicity to organism types that are impacted by OP pesticide toxicity is not known. It is also not known what pulses of toxicity, such as those associated with urban and ag stormwater runoff, mean to the beneficial uses of the receiving waters for the runoff. It would be appropriate that the Basin Plan specifically recognize this situation and begin an effort to define these issues that could ultimately become the basis for regulating OP pesticides, other pesticides and other constituent-caused toxicity in stormwater runoff and agricultural wastewaters. This issue should be started now in order that it could be in place within three years when it becomes evident that the DPR - MAA voluntary approach has failed to control OP pesticide toxicity in the state's waters.

It is my recommendation that under the revised Basin Plan, the CVRWQCB appoint a technical advisory panel of experts in OP pesticide toxicity issues representing the stakeholders in this issue who would provide guidance to the Board on the approach that should be used to determine the magnitude, extent, and types of organisms impacted by OP pesticide toxicity that would be judged to be significantly adverse to the beneficial uses of the waters of the region. Once this process of delineating what constitutes excessive toxicity has been defined, then it should be applied to various waterbodies in the region where the results of this application could, under the revised Basin Plan, be used to implement control programs for excessive OP pesticide toxicity.

Additional information on these issues is available from my web site (<http://members.aol.com/gfredlee/gfl.htm>) as: Lee, G.F. and Jones-Lee, A., "Development of a Regulatory Approach for OP Pesticide Toxicity to Aquatic Life in Receiving Waters for Urban Stormwater Runoff," presented at NorCal SETAC meeting, Reno, NV, June (1998).

If there are questions on these comments, please contact me.

Fred

***Reference as: "Lee, G.F., 'Regulation of Aquatic Life Toxicity as an Issue for CVRWQCB Basin Plan Review,' letter to J. Bruns, CA RWQCB, Sacramento, CA, September (1998)."***