

# TERRY L. PRICHARD

*Certified Consulting Professional Agronomist and Soil Scientist*

6601 South Stanley Road, Stockton, California 95215  
(209) 886-5301

---

March 10, 2005

Mr. John Herrick  
4255 Pacific Avenue, Suite 2  
Stockton, CA 95207

Re: Water Considerations for the South Delta Water Agency

Dear John:

In reviewing the document "Water Quality Considerations for the South Delta Water Agency 1981" for its current applicability, I find no new studies have been performed in the area to add to the presented information. Further, the underlying assumptions are still valid and have not been challenged.

A computer model has been developed by Isidro-Ramirez et al., for the Putah Creek Drainage Area near Davis, California. The underlying assumptions of the model including crop salt tolerance and water extraction pattern and leaching fractions were derived from the same sources as the 1981 study, namely FAO 29, Westcott and Ayres, 1985. The soil and climate inputs are from the Davis area. The model output is, therefore, constrained to apply to the Davis soils and climate situation.

The South Delta Area is substantially different from the Putah Creek area in the array of soil types, permeability's and soil variability over the entire area and within individual fields. This variability is pointed out in the 1981 report showing 84 distinctly different soil series (SCS 1992). These soils vary widely in permeability and water retention levels. The climate, including rainfall, is different in amount and distribution. Adding the differences is the existence of high water tables especially during the winter, which cause upward movement of salts and lack of effective leaching—all not accounted for in the current model.

To use such a model, adjustments for climate, soil type and permeability would have to be made. However the impacts of high water table and ineffective leaching under high water tables are not addressed as inputs to the model.

Sincerely,

Terry L. Prichard, Certified Professional Soil Scientist, Agronomist, and Crop Advisor

---

Terry L. Prichard  
*Certified Professional Soil Scientist*  
*Certified Professional Agronomist*  
Certified Professional Crop Advisor