



California Water and Environmental Modeling Forum

Promoting Excellence and Consensus in Water and Environmental Modeling

P.O. Box 488, Sacramento, CA 95812 ♦ 916-607-0435 ♦ cwemf@cwemf.org ♦ www.cwemf.org

Technical Workshop[†] on

Overview of Delta Nutrient Water Quality Problems: Nutrient Load – Water Quality Impact Modeling

Tuesday, March 25, 2008






8:30 a.m. to 4:30 p.m.

Secretary of State Building Auditorium, 1500 11th Street, Sacramento, CA.

Objective

The objective of this workshop is to present an overview of the Delta's water quality impairment issues that are associated with aquatic plant nutrients (N and P). The focus will be the current state of information available, and still needed, to model and manage excessive fertilization in the Delta. If there is interest, this overview workshop will be followed at a later date by limited-scope workshops devoted to specific topics such as domestic water supply water-quality concerns, agricultural nutrient sources and their control, and modeling nutrient load–chlorophyll response in the Delta.

Agenda

- 8:30 a.m. [Welcome and Introduction](#)  (83 KB)
Rich Satkowski (California Water and Environmental Modeling Forum)
- [Overview of Delta Nutrient Water Quality Problems Nutrient Load – Water Quality Impact Modeling](#)  (1.4 MB)
Dr. G. Fred Lee (G. Fred Lee & Associates)
- The Problems and Relationships to Nutrient Concentrations/Loads**
- 8:45 a.m. **Overview of Delta Transport: How Inflows, Diversions, and Exports Affect Flow Patterns and Transport Processes**
Tara Smith (Department of Water Resources)
- 9:15 a.m. **Delta Nutrient Drinking Water Quality Issues**
- [Delta and Aqueduct Tastes & Odors and Bluegreen Algal \(Cyanobacterial\) Toxins](#)  (2.3 MB)
Dr. Jeff Janik (California Department of Water Resources)
- [Taste & Odor Problems in Southern Water Supplies](#)  (4.2 MB)
Dr. Richard Losee (Metropolitan Water District of Southern California)
Dr. Bill Taylor (Metropolitan Water District of Southern California)
- [Delta & Aqueduct Taste & Odor Precursors: Modeling Status](#)  (1 MB)
Dr. Paul Hutton (Metropolitan Water District of Southern California)

[†] Workshop organized by Drs. G. Fred Lee and Anne Jones-Lee of G. Fred Lee & Associates, El Macero, California (gfredlee@aol.com, www.gfredlee.com)

10:30 a.m. **Break**

10:45 a.m. [Nutrient Sources for Growth of Exotic Aquatic Plants in the Sacramento-San Joaquin Delta](#) Due to file size, presentation link is in html

Dr. Lars W.J. Anderson (USDA-Agricultural Research Service)
Marcia Carlock (California Department of Boating and Waterways)

12:00 p.m. **Lunch**

1:00 p.m. [Low DO Problems in the SJR Deep Water Ship Channel](#)  (145 KB)
Mark Gowdy (State Water Resources Control Board)

[Modeling Agricultural Nutrient Loads, Algal Biomass, and Low DO in the SJR Deep Water Ship Channel](#)  (1.1 MB)


Dr. Carl Chen and Joel Herr (Systech Engineering, Inc.)

Nutrient Sources, Concentrations/Loads

2:00 p.m. [Impact of Sacramento River Input of Phosphorus to the Delta on Algal Growth in the Delta](#)  (0.7 MB)

Dr. Erwin Van Nieuwenhuyse (Bureau of Reclamation) *Summary of his recent paper describing the response of average summer chlorophyll concentration in the Delta to an abrupt and sustained reduction in phosphorus discharge from the Sacramento County Regional Sanitation District wastewater treatment facility.*

2:45 p.m. **Break**

3:00 p.m. [Conceptual Model of Nutrient Sources in the Central Valley and Delta](#)  (2.2 MB)
Dr. Sujoy B. Roy (Tetra Tech, Inc.)

Regulatory Issues

3:30 p.m. [Development of Nutrient Criteria](#)  (0.6 MB)
Steve Camacho (State Water Resources Control Board)

CVRWQCB Drinking Water Policy

Karen Larsen (Central Valley Regional Water Quality Control Board)

[CVRWQCB Irrigated Lands Agricultural Conditional Waiver Water Quality Nutrient Monitoring Program](#)  (1.1 MB)

Margie Read (Central Valley Regional Water Quality Control Board)

4:25 p.m. **Final Comments**

4:30 p.m. **Adjourn** (Please turn in your evaluations)

Workshop Speakers

Dr. Lars W. J. Anderson, Lead Scientist/Plant Physiologist, USDA Agricultural Research Service Exotic and Invasive Weed Research, Davis, CA (lwanderson@ucdavis.edu)

Steve Camacho, Environmental Scientist, Planning, Standards, and Implementation Unit, State Water Resources Control Board, Sacramento, CA (scamacho@waterboards.ca.gov)

Marcia Carlock, Aquatic Weed Control Program Manager, California Department of Boating and Waterways, Sacramento, CA (MCARLOCK@dbw.ca.gov)

Dr. Carl W. Chen, President, Systech Engineering, Inc., San Ramon, CA (carl@systechengineering.com)

Mark Gowdy, Water Resources Engineer, Division of Water Rights, State Water Resources Control Board, Sacramento, CA (mgowdy@waterboards.ca.gov)

Joel W. Herr, Vice President and Chief Engineer, Systech Engineering, Inc., San Ramon, CA (joel@systechengineering.com)

Dr. Paul Hutton, Senior Engineer, Water Resources Management Group, Metropolitan Water District of Southern California, Sacramento, CA (phutton@mwdh2o.com)

Dr. Jeff Janik, Limnologist, California Department of Water Resources, Sacramento, CA (jjanik@water.ca.gov)

Karen Larsen, Senior Environmental Scientist, Central Valley Regional Water Quality Control Board, Rancho Cordova, CA (klarsen@waterboards.ca.gov)

Dr. G. Fred Lee, President, G. Fred Lee & Associates, El Macero, CA (gfredlee@aol.com)

Dr. Richard Losee, Water Quality Laboratory, Metropolitan Water District of Southern California, LaVerne, CA (rlosee@mwdh2o.com)

Margie Read, REAll, Chief, Monitoring and Assessment Unit, Irrigated Lands Conditional Waiver Program, Central Valley Regional Water Quality Control Board, Rancho Cordova, CA (mread@waterboards.ca.gov)

Dr. Sujoy B. Roy, Principal Engineer, Tetra Tech, Inc., Lafayette, CA (Sujoy.Roy@tetratech.com)

Rich Satkowski, Executive Director, California Water and Environmental Modeling Forum Sacramento, CA (cwemf@cwemf.org)

Tara Smith, Chief, Delta Modeling, Bay-Delta Office, CA Department of Water Resources Sacramento, CA (tara@water.ca.gov)

Dr. Bill Taylor, Limnologist, Reservoir Team Manager, Water Quality Section, Water Systems Operations, Metropolitan Water District of Southern California, LaVerne, CA (wtaylor@mwdh2o.com)

Dr. Erwin van Nieuwenhuysse, Fisheries Biologist, Division of Environmental Affairs, US Bureau Reclamation, Sacramento, CA (evannieuwenhuysse@mp.usbr.gov)