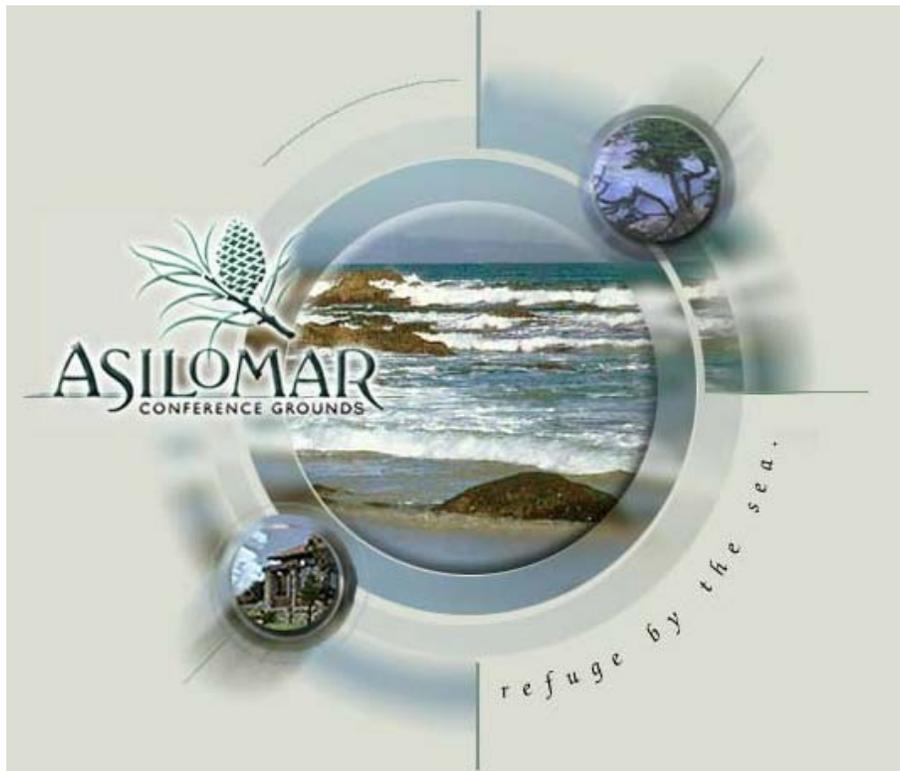




## California Water and Environmental Modeling Forum

### 2007 Annual Meeting Agenda

**“California Water: Where Change is Constant”**



February 26-28, 2007

Asilomar Conference Grounds  
800 Asilomar Boulevard  
Pacific Grove, California



## California Water and Environmental Modeling Forum 2007 Annual Meeting Summary of Sessions

### Monday, February 26, 2007

Time	Session	Moderator	Location
10:15 am-12:00 pm	1: 2006 CalSim-II Developments and Applications	Sushil Arora	Fred Farr
	2: 2006 DSM2 Developments and Applications	Parviz Nader	Oak Shelter
12:00-1:00 pm	Lunch	---	Dining Hall
1:15-3:00 pm	3: CalSim-III Developments I	Hongbing Yin	Fred Farr
	4: Modeling Issues of the Delta	KT Shum	Oak Shelter
3:00-4:00 pm	Registration	---	Social Hall
4:15-6:00 pm	5: CalSim-III Developments II	Hongbing Yin	Fred Farr
	6: South Delta & Lower San Joaquin River Water Quality	Paul Hutton	Oak Shelter
6:00-7:00 pm	Dinner	---	Dining Hall
7:00-10:00 pm	7: Reception I and Poster Session	Mike Deas	Fred Farr
8:00-9:00 pm	Keynote Speaker: "Flood Risk Management and the Future of the Delta," Jeffery Mount (Professor, U.C. Davis Department of Geology)	KT Shum	

### Tuesday, February 27, 2007

Time	Session	Moderator	Location
7:30-8:15 am	Breakfast	---	Dining Hall
8:15-9:00 am	8: CWEMF Activities / Annual Business Meeting	KT Shum	Fred Farr
9:00-10:00 am	Revision of CWEMF's Modeling Protocols Document	Rich Satkowski	
10:15 am-12:00 pm	9: Delta Risk Management Strategy	Ralph Svetich	Fred Farr
	10: 2006 IWFM Developments and Applications	Tariq Kadir	Oak Shelter
12:00-1:00 pm	Lunch	---	Dining Hall
1:15-3:00 pm	11: Sharpening Tools for the Next CA Water Plan Update	Rich Juricich	Fred Farr
	12: Modeling Conjunctive Use in the Central Valley	Julien Harou	Oak Shelter
3:00-4:00 pm	Registration	---	Social Hall
4:15-6:00 pm	13: Screening/Decision Support Modeling for CA Water	Armin Munevar	Fred Farr
	14: Integrated Regional Modeling	Ali Taghavi	Oak Shelter
6:00-7:00 pm	Dinner	---	Dining Hall
7:00-10:00 pm	15: Reception II	Rich Satkowski	Fred Farr
7:45-8:30 pm	Hugo B. Fischer Award/Presentation by Recipient	Nigel Quinn	
8:30-9:15 pm	Career Achievement Award/Presentation by Recipient		

### Wednesday, February 28, 2007

Time	Session	Moderator	Location
7:30-8:15 am	Breakfast	---	Dining Hall
8:15-10:00 am	16: Early Awakenings for Delta Visions	Jay Lund	Fred Farr
	17: General Reservoir Simulation Model Applications	Leslie Stillwater	Oak Shelter
10:15 am-12:00 pm	18: Temperature Modeling and Applications	Mike Deas	Fred Farr
	19: Climate Change Modeling	John Andrew	Oak Shelter
12:00-1:00 pm	Lunch / Check-Out	---	Dining Hall
1:00-2:40 pm	20: Water Community Program Updates	Fred Feyrer	Chapel
2:00-4:40 pm	21: IEP / CWEMF Joint Modeling Session	Paul Cadrett	Chapel
4:40-6:00 pm	IEP Registration	---	Social Hall
6:00-7:00 pm	Dinner	---	Dining Hall
7:00-9:00 pm	22: IEP Social and Guest Speaker: "Monterey Bay Aquarium's White Shark Research Program," John O'Sullivan, Curator of Field Operations	IEP Rep	Chapel

Note: Please see page 12 for a summary of the Interagency Ecological Program's March 1-2, 2007 sessions.



## 2007 Annual Meeting Agenda

Version Date:  
February 23, 2007

**10:15 a.m.-12:00 p.m.**

### **Session One: 2006 CalSim-II Developments and Applications**

Moderator: Sushil Arora (CA DWR)

Location: Fred Farr Forum

Development of CalSim-II Model for Common Assumptions Process for the Surface Storage Investigations, Rob Leaf and Brian Van-Lienden (CH2M Hill)

Updated Delta-Flow Salinity ANN module in CalSim-II/CalSim-III Model; and Its Application as a Forecasting Tool, Shengjun Wu and Sanjaya Seneviratne (CA DWR)

Delta Water Demands using DETAW and the New Delta Representation in CalSim-II/CalSim-III Model, Tariq Kadir (CA DWR)

Status Report on WRIMS Software Development and Testing for use in CalSim-II/CalSim-III Model, Clay Booher and Ryan Wilbur (CA DWR)

### **Session Two: 2006 DSM2 Development and Applications**

Moderator: Parviz Nader-Tehrani (CA DWR)

Location: Oak Shelter

A Method to Improve DSM2/QUAL Accuracy: Using Salinity Fingerprints to Detect and Remove Model Bias, Marianne Guerin and Tom Rose (CCWD)

Forecasting Contaminant Movement in the Delta Using the DSM2 Historical Model, Marianne Guerin (CCWD)

Adaptive Management of Flow through Three Mile Slough to Improve Delta Water Quality (DSM2 Modeling Experiments), Bijaya Shrestha and Parviz Nader-Tehrani (CA DWR)

DSM2 Version 7 Implementation Status, Eli Ateljevich (CA DWR)



**12:00-1:00 p.m. — Lunch**

Note: Tuesday lunch is not included in the lodging or registration fees, but can be obtained from a CWEMF representative or purchased separately in the Social Hall at the registration counter.

**1:15-3:00 p.m.**

**Session Three: CalSim-III Developments I**

Moderator: Hongbing Yin (CA DWR)

Location: Fred Farr Forum

Overview of CalSim-III Hydrology Development, Hongbing Yin (CA DWR)

CalSim-III Surface Water Representation (Water Budget Areas, Demand Units, and Model Schematic), Todd Hillaire (CA DWR), Jeff Payne (MWH)

CalSim-III Agricultural Demand using IWFM Calculator (IDC), Can Dogrul (CA DWR)

Agricultural and Urban Water Demand and local Water Supply Representations in CalSim-III, Messele Ejeta (CA DWR), Lee Bergfeld (MBK)

**Session Four: Modeling Issues of the Delta**

Moderator: KT Shum (EBMUD)

Location: Oak Shelter

Performance Metrics in DSM2 Historical Simulations, Tara Smith (CA DWR)

Roundtable Discussion, All

Simulating Seawater Intrusion, Edward Gross (Environmental Consultant)

Roundtable Discussion, All



**3:00-4:00 p.m. — Registration (Social Hall)**

**4:15-6:00 p.m.**

**Session Five: CalSim-III Developments II**

Moderator: Hongbing Yin (CA DWR)

Location: Fred Farr Forum

Linking CalSim-III to C2VSim via the Use of Discrete Kernel - (1) Theory, Chuck Young (SEI)

Linking CalSim-III to C2VSim via the Use of Discrete Kernel - (2) Implementation, Brian Joyce (SEI)

CalSim-III Implementation and Initial Results, Andy Draper (MWH Americas)

**4:15-6:00 p.m. (Continued)**

**Session Six: South Delta and Lower San Joaquin River Water Quality**

Moderator: Paul Hutton (MWDSC)

Location: Oak Shelter

Overview of the South Delta Improvement Program (SDIP) and San Joaquin River Efforts,  
Paul Marshall (CA DWR)

SDIP Gate Operations and South Delta Water Quality, Kyle Winslow (CH2M Hill)

SWRCB Modeling I – Historical Modeling, Tara Smith (CA DWR)

SWRCB Modeling II – Data Analysis and Particle Tracking Modeling,  
Parviz Nader-Tehrani (CA DWR)

**6:00-7:00 p.m. — Dinner**

**7:00-10:00 p.m.**

**Session Nine: Evening Program**

Moderator: KT Shum (CWEMF Convener/EBMUD)

Location: Fred Farr Forum



**7:00-10:00 p.m. Reception I and Poster Session**

Poster session sponsored by Watercourse Engineering.

Reception sponsored by CWEMF and CH2M Hill.

(Poster session titles to be announced)

**8:00-9:00 p.m. Keynote Speaker: Jeffery Mount**

(Professor, U.C. Davis Department of Geology)

**Flood Risk Management and the Future of the Delta**



## 7:30-8:15 a.m. — Breakfast

## 8:15-10:00 a.m.

### Session Eight: CWEMF Activities / Annual Business Meeting / Modeling Protocols Revision

Moderator: KT Shum (CWEMF Convener / EBMUD)

Location: Fred Farr Forum

- 8:15 The Year In Review — KT Shum (CWEMF Convener / EBMUD)
- 8:25 Report on CWEMF Model User Groups — Nigel Quinn (Past-Convener/LBNL/USBR)
- 8:30 Report on CWEMF Workshops — Tara Smith (Vice-Convener / CA DWR)
- 8:35 Executive Director's Report — Rich Satkowski (CWEMF)
- 8:45 Annual Business Meeting — KT Shum
  - Declaration of a Quorum / Business Reports
  - Officer Elections / Other Business
- 9:00 Revision of the 2000 CWEMF Document "Protocols for Water and Environmental Modeling" — Rich Satkowski
- 9:15 Planning for 2007 — All



## 10:15 a.m.-12:00 p.m.

### Session Nine: Delta Risk Management Strategy

Moderator: Ralph Svetich (CA DWR)

Location: Fred Farr Forum

- Delta Risk Management Strategy Overview, Ralph Svetich (CA DWR)
- Potential Impact Hazards Analysis, Said Salah-Mars (URS Corp.)
- Risk Analysis Approach and Water Modeling, Bill Betchart (Jack R. Benjamin & Associates)
- Developing a Salt Transport Model for Rapid Analysis of Levee Breach Events in the Sacramento-San Joaquin Delta, John F. DeGeorge (RMA)
- Three-Dimensional Simulations and Analysis of Salt Transport for the Delta Risk Management Strategy, Edward Gross (Consultant) and Michael MacWilliams (Consultant)

### Session Ten: 2006 IWFM Developments and Applications

Moderator: Tariq Kadir (CA DWR)

Location: Oak Shelter

- IWFM Version 3.0, Can Dogrul (CA DWR)
- C2VSIM Calibration: Water Budgets, Stream Flows, and Groundwater Elevations, Charlie Brush (CA DWR) and Steve Shultz (CH2M Hill)
- Butte County IWFM Model, Brian Heywood (CDM)
- Application of IWFM to the Evaluation of Conjunctive Use in Solano and Yolo Counties, Kenneth Loy (West Yost Associates)

**12:00-1:00 p.m. — Lunch**

**1:15-3:00 p.m.**

**Session Eleven: Sharpening Tools for the Next California Water Plan Update**

Moderator: Rich Juricich (CA DWR)  
Location: Fred Farr Forum



Delivering Numbers with SWAN – Statewide Water Analysis Network, Rich Juricich (CA DWR)

Conceptualizing California’s Water Management System with UML Morteza Orang and Dong Chen (CA DWR)

Application of WEAP to Explore Future Water-Related Scenarios Mohammad Rayej (CA DWR),

New Investments in Water Portfolios Todd Hillaire (CA DWR)

**Session Twelve: Modeling Conjunctive Use in the Central Valley**

Moderator: Julien Harou (UC Davis)  
Location: Oak Shelter

Climate Change and Conjunctive Use in California, Sebastian Vicuna (UC Berkeley), John Dracup (UC Berkeley), and Larry Dale (LBNL)

Groundwater Availability in California’s Central Valley: An Updated Central Valley Regional Aquifer System Analysis Model, Claudia Faunt, Randall Hanson and Kenneth Belitz (USGS San Diego)

Numerical Illustrations of the Discrete Kernels Approach to Modeling for Conjunctive Use, Hubert Morel-Seytoux (Hydroprose Consulting)

A Hydro-Economic Conjunctive Use Optimization Model of the Sacramento Valley, Julien Harou and Jay Lund (UC Davis)

**3:00-4:00 p.m. — Registration (Social Hall)**



**4:15-6:00 p.m.**

### **Session Thirteen: Screening/Decision Support Modeling for California Water Management**

Moderator: Armin Munévar (CH2M Hill)

Location: Fred Farr Forum

Impacts of Uncertainty in Efficient Management of California Water Resources,  
Newsha Ajami (UC Berkeley)

Dynamic Modeling for Oakdale Irrigation District Water Management,  
Jeanne Brantigan (CH2M Hill),

Metropolitan's SWP Supply Forecasting and Optimal Scheduling,  
Peter Louie and Tony Liudzius (MWDSC)

### **Session Fourteen: Integrated Regional Modeling**

Moderator: Ali Taghavi (WRIME)

Location: Oak Shelter

Integrated Modeling Concepts and how they support Integrated Basin Planning,  
Ali Taghavi (WRIME)

Integrated Modeling: An Analytical Tool for Integrated Regional Water Management  
Plan Development – Application to Kings Basin, Reza Namvar (WRIME)

HydroGeoSphere: Ongoing Model Enhancements and Applications in Central Valley and  
Upper Klamath River Basin, George Matanga (USBR)

HydroGeoSphere: Model Applications in Central Valley and Upper Klamath River Basin,  
George Matanga (USBR)

**6:00-7:00 p.m. — Dinner**

**7:00-9:00 p.m.**

### **Session Fifteen: Evening Program**

Moderator: Nigel Quinn (LBNL / USBR)

Location: Fred Farr Forum

**7:00-10:00 p.m.** Reception II

**7:45-8:30 p.m.** Presentation of the Hugo B. Fischer Award  
and Remarks by the Award Recipient

**8:30-9:15 p.m.** Presentation of the Career Achievement Award  
and Remarks by the Award Recipient



## 7:30-8:15 a.m. — Breakfast

## 8:15-10:00 a.m.

### Session Sixteen: Early Awakenings for Delta Visions

Moderator: Jay Lund (UC Davis)

Location: Fred Farr Forum

Modeling Statewide Water Supplies Without Delta Exports, Stacy Tanaka (UC Davis)

Modeling Effects of Salinity Scenarios on Agricultural Economics in the Delta,  
Marcelo Olivares (UC Davis)

Modeling to Suggest Promising Solutions to Stakeholders, Jay Lund (UC Davis)

Delta Hydrodynamics and Tidal Prisms, Richard Rachiele (RMA)

### Session Seventeen: General Reservoir Simulation Model Applications

Moderator: Leslie Stillwater (USBR)

Location: Oak Shelter

HEC-ResSim Modifications: Better Tools to Simulate the Operation  
Of California Reservoirs, Joan Klipsch and Tom Evans (USCOE)

RiverWare: Generalized River Basin Modeling,  
Tim Magee (CADSWES, University of Colorado)

Groundwater/Surface Water Conjunctive Management for Pacific  
Northwest Projects, Leslie Stillwater (USBR)



## 10:15 a.m.-12:00 p.m.

### Session Eighteen: Temperature Modeling and Applications

Moderator: Mike Deas (WaterCourse Engineering)

Location: Fred Farr Forum

Cold Water Inflow into a Reservoir: Field Data and Modeling Study,  
Rachel Simons (EBMUD)

Upper Yuba River Temperature Model, Niels Riegels (CH2M Hill)

Trinity River Flow and Temperature Modeling,  
I.E. (Ert) Sogutlugil (Watercourse Engineering)

The Virgin River Operations Optimization Model,  
Leon Basdekas (WaterCourse Engineering)

## 10:15 a.m.-12:00 p.m. (Continued)

### Session Nineteen: Climate Change Modeling

Moderator: John Andrew (CA DWR)

Location: Oak Shelter

Global Warming Effects: Initial Results for 2025, Tuolumne Basin, Bruce J. McGurk (Hetch Hetchy Water and Power, SFPUC)

Exploring the Use of Risk Analysis to Study the Effects of Climate Change on Central Valley Project and State Water Project Operations, Levi Brekke (USBR)

Challenge of Updating Reservoir Regulation Curves Considering Climate Change/Variability, Stu Townsley (USCOE)

57-year Downscaling of California Climate Reanalysis to 10km Horizontal Resolution, Hideki Kanamaru (Scripps Institute of Oceanography, UC San Diego)

## 12:00-1:00 p.m. — Lunch / Check-Out

## 1:00-2:40 p.m.

### Session Twenty: Water Community Program Updates

Moderator: Fred Feyrer (CA DWR)

Location: Chapel

Welcome and IEP Update, Chuck Armor (CA DFG)

CWEMF Update, KT Shum (CWEMF Convener/EBMUD)

CALFED Science Program Update, Michael Healey (CBDA)

Future of the Delta I, Jeff Mount (UC Davis)

Future of the Delta II, Jay Lund (UC Davis)



**3:00-4:40 p.m.**

**Session Twenty-One: IEP / CWEMF Joint Modeling Session**

Moderator: Paul Cadrett (USFWS)

Location: Chapel

San Joaquin River Restoration Settlement Agreement, Russ Bellmer (NOAA Fisheries)

Habitat Management, Preservation, and Restoration Plan for Suisun Marsh,  
Laurie Briden (CA DFG) and Cassandra Enos (CA DWR)

Overview of the 2005 LIDAR Elevation Data Acquisition for the Suisun Marsh and  
Yolo Bypass, Joel Dudas (CA DWR)

LIDAR Applications, Chris Enright (CA DWR)

IEP Delta Smelt Programmatic Review, Gonzalo Castillo (USFWS)

**4:40-6:00 p.m. — IEP Registration**

**6:00-7:00 p.m. — IEP Dinner**

**7:00-9:00 p.m.**

**Session Twenty-Two: IEP Social and Guest Speaker**

Moderator: IEP Representative

Location: Chapel

**Guest Speaker:** John O'Sullivan, Monterey Bay Aquarium Curator of Field Operations

**Monterey Bay Aquarium's White Shark Research Program**





## 2007 Annual Meeting Poster Session Titles

Sponsored by Watercourse Engineering

Poster 1: The Role of Conceptual Models In Water Quality, Mike Deas (WaterCourse Engineering)

Poster 2: CalSim-III Hydrology Development Project: Surface Water Representation, Jeffrey Payne and Andy Draper (MWH Americas)

Poster 3: Simulating Large-Scale Sacramento/San Joaquin Island Flooding by DSM2, Qiang (Jon) Shu (CA DWR)

Poster 4: Sacramento Weir – An Overview, Adam Schneider (CA DWR)

Poster 5: Using Arc Objects and ArcGIS Surface Analysis Functions to Generate Finite Element Meshes, Thomas Heinzer and Diane Williams (USBR)

Poster 6: Fundamental Research On Object Generators And Object Interactions, Thomas Heinzer and Diane Williams (USBR)

Poster 7: Using ArcGIS And Flood Models In Emergency Action Plans, Thomas Heinzer and Diane Williams (USBR)

Poster 8: Analytic Modeling Systems: Three-Dimensional Fence Diagrams (Circa 2004), Thomas Heinzer and Diane Williams (USBR)

Poster 9: Water Supply System Model to Improve Stream Management for Endangered Species Fish, S. Shaikh, J. Micko, and M. Merritt (SCVWD)

Poster 10: Integrated Water Flow Model (IWFM): A Tool For Numerically Simulating Linked Groundwater, Surface Water, and Land-Surface Hydrologic Processes, Emin Dogrul, Charles Brush, and Tariq Kadir (CA DWR)

Poster 11: Calibration Of A Regional Aquifer System Model: The California Central Valley Groundwater - Surface Water Simulation Model (C2VSIM), Charles Brush, Emin Dogrul, Tariq Kadir (CA DWR), Michael Moncrief (CA DWR, currently MBK), Steve Shultz (CH2M Hill), Matt Tonkin (SSPA), and Dan Wendell (CH2M Hill)

**California Water and Environmental Modeling Forum  
2007 Annual Meeting**

**Important Telephone Numbers**

Asilomar Conference Center – (831) 372-8016  
 Rich Satkowski – (916) 607-0435 (cell)  
 KT Shum – (925) 336-1228 (cell)



**Interagency Ecological Program, March 1-2, 2007 Sessions**

<b>Date</b>	<b>Time</b>	<b>Session</b>	<b>Moderator</b>	<b>Location</b>
Thursday March 1, 2006	8:15-10:20 am	Pelagic Organism Decline	Mike Chotkowski	Chapel
	10:40 am-12:00 pm	Phytoplankton Conditions and Trends	Matt Nobriga	Chapel
	1:00-2:00 pm	Does Size Matter? No, Really!	Lenny Grimaldo	Chapel
	7:00-9:00 pm	Social and Poster Session	IEP Representative	Fred Farr
Friday March 2, 2006	8:15-10:00 am	Fish Facilities	Bob Fujimura	Chapel
	10:20 am-12:00 pm	Sturgeon and Striped Bass	Jeff McLain	Chapel

