

Asilomar



2001

*Bay-Delta Modeling Forum
&
Interagency Ecological Program Workshop
February 27 – March 2, 2001*

1:15 p.m. – 3:15 p.m.



Session One: DSM2 Calibration Through the IEP Project Work Team

Moderator: Paul Hutton (DWR)

Location – Chapel

Pete Smith (USGS): Introductory Remarks

Brad Tom (DWR): Bathymetry Data Collection and Application

Parviz Nader (DWR): DSM2 Calibration and Verification

Chris Enright (DWR): DSM2 IEP Project Work Team Documentation

Session Two: Data Management

Moderator: Ken Kirby (Saracino-Kirby Inc.)

Location – Curlew

Ken Kirby (Saracino-Kirby Inc.): Long-term Data Management Issues Associated with the CALFED Water Management Strategy

Moderated Panel Discussion: The panel will discuss data issues raised by the UCD CALVIN Modeling, the Bulletin 160 Process, and modeling and data management in support of SWP and CVP operations and planning, and the Interagency Ecological Program.

Panel: Mimi Jenkins (UCD), Tariq Kadir (DWR), Karl Jacobs (DWR), Lloyd Peterson (USBR), and others to be confirmed.

1:15 p.m. – 3:15 p.m.

Session Three: Central Coast Groundwater Resources: Data, Modeling, and Management

Moderator: Matt Zidar (Jones & Stokes Associates)
Location – Marlin

Curtis Weeks (Monterey County Water Resource Agency):
An Overview of Salinas Valley Groundwater Issues

Ali Taghavi (Water Resources and Information Management Engineering, Inc.):
Groundwater Modeling to Evaluate Project Alternatives and Benefits, Salinas Valley, California

Lew Rosenberg (Consulting Geologist):
New Digital Geologic Maps for Monterey County and Their Use in Water Resource Planning

Joe Oliver (Monterey Peninsula Water Management District):
Groundwater Resources in Water Supply Planning for the Monterey Peninsula

Session Four: Recent Modeling by the USACE Hydrologic Engineering Center (HEC)

Moderator: Art Pabst (HEC)
Location – Fred Farr Forum

Art Pabst (HEC): Overview, HEC Models (NexGen Project) Development Status and Plans

Art Pabst (HEC): An Integrated Decision Support System for Corps Water Management

Chris Dunn (HEC): Hydrologic Modeling for the Sacramento, San Joaquin,
and Tulare Lake Bed Basins Using HEC-GeoHMS

3:15 - 4:15 Registration

Location – Administration Building

4:00 p.m. – 6:00 p.m.

Session One: CALSIM Developments

Moderator: Sushil Arora (DWR)

Location – Curlew

Armin Munevar (DWR) and Jim Cornwell (USBR): New Features in the Joint CALSIM Model

Tariq Kadir (DWR) and Ramona Swafford (USBR): Hydrologic Data Development
for the Joint CALSIM Model

Sanjaya Seneviratne (DWR) and Armin Munevar (DWR): Modeling of Delta Standards Using ANN
Approach in the Joint CALSIM Model

Armin Munevar (DWR) and Tariq Kadir (DWR): Development of Shorter Time-step Modeling
in the Joint CALSIM Model

Session Two: Modeling Aspects of Climate Change on Water Resources and the Environment

Moderator: Nigel Quinn (LBNL)

Location – Fred Farr Forum

Mike Dettinger (USGS): Hydrometeorologic Aspects of the New Year 1997 Flood in Yosemite Valley

Norm Miller (LBNL): Climate Projection Analysis of Monthly Precipitation and Streamflow
for Eight Sierra Nevada Basins

Levi Brekke (UCB): Application of the ECOSIM Model for Assessing Water Allocation Impacts

David Silverman (UCB): The Integration of DSM2-SJR into Climate Change Modeling for the San Joaquin Basin

Peggy Lehman (DWR): The Influence of Climate on Estuarine Production in the San Francisco Bay Estuary

4:00 p.m. – 6:00 p.m.

Session Three: CALFED-BDMF Review Panel: Impact of Island Levee Breaches on San Francisco Estuary Hydrodynamics and Salinity

Moderator: Chris Enright (DWR)
Location – Chapel

Larry Smith (USGS): Introduction of Science Panel and Scope of Work

Chris Enright (DWR): Review of DWR Modeling and Sensitivity Analysis

John DeGeorge (RMA): Review of RMA Modeling and Sensitivity Analysis

Joel Dudas (DWR) and Curt Schmutte (DWR): Application of GIS Modeling for Habitat Restoration Planning

Session Four: Economic Modeling

Moderator: Wendy Illingworth (Economic Insights)
Location – Dolphin

Ken Kirby (Saracino-Kirby, Inc.): CALFED Water Management Strategy Evaluation: Counting the Costs

Mimi Jenkins (UCD) and Richard Howitt (UCD): Balancing System Capacity and Economic Demands:
Statewide Results from the CALVIN Economic Engineering Model

Wendy Illingworth (Economic Insights): Economics Decision Model for Water Recycling Projects

6:00 Dinner

Forum Social and Evening Program

Location – Chapel

7:30 Presentation of the Hugo B. Fisher Award

7:40 Remarks by Hugo B. Fisher Award Recipient

8:00 Dan Lueke (Environmental Defense): Restoration in the Colorado River Basin

Forum Plenary

Moderator: Rob Tull (CH2MHill)

Location – Chapel

8:15 Rob Tull (CH2MHill): Welcome

Reports on Forum Sponsored Peer Review Activities

8:20 Pete Smith (USGS): Status Report on One-Dimensional Hydrodynamic Model Review and Why Should We Test Model Engines?

8:35 Mike Deas (Consultant) and Cindy Lowney (Philip Williams & Associates): Review of Water Temperature Models

8:50 John Williams (BDMF): Review of the Effects of Water Temperature on Salmonids

8:55 Nigel Quinn (LBNL): Progress Report, IGSM Review

9:05 Nigel Quinn (LBNL): Workshops

9:15 John Williams (BDMF): Executive Director's Report

9:30 Business Meeting

Note: A proposal to change the name of the Forum to "California Water Modeling Forum" will be considered.



10:00 - 10:15 Break

Session One: Colorado River Water for California

Moderator: Rich Satkowski (SWRCB)
Location – Marlin

10:15 a.m. – 12:05 p.m.

Jan Matusak (MWD): Municipal Water Supplies from the Colorado River

John Eckhardt (Imperial Irrigation District): Agricultural Water Supplies from the Colorado River

Dan Luecke (Environmental Defense): Restoration of the Colorado River Delta

Session Two: Ecosystem Modeling

Moderator: John Williams (BDMF)
Location – Fred Farr Forum

Dave Marmorek (ESSA): Decision Analysis of Flow Management in Clear Creek,
Shasta County, California

Karen Holl (UCSC): Linking Large-scale Hydrological and Biological Processes in Restoring
Riparian Forest Ecosystems

Jerry Ripperda (DWR): Status Report on the Ecological Functions Model
for the Comprehensive Study

Session Three: Modeling the Bay

Moderator: Pete Smith (USGS)
Location – Curlew

Rich Smith (USGS): Modeling San Francisco Bay Bathymetry

Bruce Jaffe (USGS): Change Analysis Using Historical Bathymetry of the Bay

John Warner (USGS): Generation and Effects of Convergent Zones in Tidal Channels

Session Four: Environmental Water Account

Moderator: Dave Fullerton (NHI)
Location – Chapel

Dave Fullerton (NHI): Conceptual Basis for the Environmental Water Account

Leo Winternitz (Water Forum): Implementation of the Environmental Water Account

Sushil Arora (DWR): Modeling for the Environmental Water Account

12:05 Lunch

Session One: Program Overview

Moderator: Chuck Armor (DFG)
Location – Chapel

- 1:00 Chuck Armor (DFG): Welcome, IEP Update, and Status of Science Centers
- 1:20 Sam Luoma (USGS): CALFED Science Program
- 1:50 Terry Mills (CALFED):
Life After the CALFED Record of Decision
- 2:20 Perry Herrgesell (DFG): CALFED-IEP Integration



2:40 - 3:00 Break

Session Two: Joint Modeling Forum and IEP Session

Moderator: John Williams (BDMF)
Location – Chapel

- 3:00 Rob Tull (CH2MHill): Bay-Delta Modeling Forum Update
- 3:10 Curtis Creel (DWR): The Need for Real-time Modeling—What Are We Trying to Accomplish?
- 3:30 Jon Burau (USGS): Hydrodynamics and Accumulation Mechanisms in North Bay

4:00 - 6:00 Registration

Location – Administration Building

Concurrent Breakout Sessions 4:15 p.m. – 6:00 p.m.

Session One: Hydrodynamic and Water Quality Modeling of the San Joaquin River

Moderator: Paul Hutton (DWR)
Location – Dolphin

Nigel Quinn (LBNL): Introductory Remarks

Les Grober (CVRWQCB): Status of the TDMLs in the San Joaquin River

Thomas Pate (DWR): DSM2 Extensions of San Joaquin River Upstream of Vernalis

Hari Rajbhandari (DWR): DSM2 Modeling of San Joaquin River Dissolved Oxygen Levels

Session Two: Salmon Modeling

Moderator: John Williams (BDMF)
Location – Chapel

Eric Bjorkstedt (NMFS): Modeling the Effects of Disturbance on a Coho Salmon Metapopulation

Brad Cavallo (DWR): Critiquing the Use of Carcass Mark-Recapture for Estimating Salmon Spawning Escapement: Effect of River Conditions, Effort, and Sampling Design

Session Three: Real-time Delta Modeling for State Water Project Operations Decision Support

Moderator: Tara Smith (DWR)
Location – Curlew

Tara Smith (DWR): Introductory Remarks

Eli Ateljevich (DWR): Technical Hurdles to Overcome in Using the Delta Simulation Model (DSM2) in a Real-time Forecasting Model

Michael Mierzwa (DWR): Real-time Preprocessing, Postprocessing, and WEB Page Output

Kate Le (DWR): Real-time Hydrodynamic, Water Quality, and Particle Tracking Applications

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

Session Four: Hydrodynamic Modeling of Rivers and Marshes

Moderator: Chris Bowles (Philip Williams & Associates)
Location – Marlin

Yantao Cui (Stillwater Sciences): Sediment Transport Modeling on River Restoration Projects:
Complexity vs. Simplicity

C.B. Bowles (Philip Williams & Associates) and M. Tungo (Danish Hydraulic Institute):
Numerical Modeling of the Napa-Sonoma Marsh Complex Using Dynamic Coupling of
One- and Two-Dimensional Numerical Models

Michelle Orr (Philip Williams & Associates) Dale Kerper (Danish Hydraulic Institute),
and Chris Bowles (Philip Williams & Associates): Hamilton Airfield Wetland Restoration
Morphological Modeling

6:00 *Dinner*

7:15 *Evening Talk*

Curt Ebbesmeyer (Evans-Hamilton, Inc.) and Jim Ingraham (NMFS): Flotsam Adrift Across the North Pacific

8:30 *Social*



7:30 Breakfast

8:15 Announcements

Session Three: Delta Cross Channel Investigations

Moderator: Bruce Herbold (USEPA)

- 8:25 Bruce Herbold (USEPA): Overview and Background of Delta Cross Channel Studies
- 8:35 Jon Bura (USGS) and David Briggs (CCWD): Where Does the Water Go?
Hydrodynamics and Water Quality
- 8:55 Mark Pierce (USFWS), Mike Horn (USGS), and Dave Vogel (Natural Resource Scientists, Inc.):
Do Small Fish Go With the Flow? Juvenile Fish Movements in the Area
of the Delta Cross Channel
- 9:40 Dan Odenweller (DFG), Jeff McLain (USFWS), and Mike Horn (USGS): Do Big Fish Go With the Flow?
Adult Fish Movement in Response to Delta Cross Channel Operations

10:05 - 10:25 Break

***Session Four: IEP Retrospective and Challenges for the Future:
Thoughts from the "Mossbacks" Panel Discussion***

Moderator: Jim Sutton (SWRCB)

Panel Discussion

10:25 - 12:05

Panel: Jerry Johns (SWRCB), Bob Potter (DWR, retired), Pete Chadwick (DFG, retired),
Randy Brown (DWR, retired), Marty Kjelson (USFWS), and Fred Nichols (USGS, retired)

12:05 Lunch

Session Five: IEP Coordinators: Meeting the Challenges

Moderator: Jim Sutton (SWRCB)

Panel Discussion

1:00 - 2:30

Panel: Alan Baracco (DFG), Barbara McDonnell (DWR), Marty Kjelson (USFWS), Kim Taylor (CALFED), Ken Lentz (USBR), Bruce Herbold (USEPA), Mike Aceituno (NMFS), Paul Bowers (USACE), and Chuck Armor (DFG)

2:30 - 6:00 *Formal
and Informal
Meetings*

6:00 *Dinner*

7:00 - 9:00 *Poster Session*

Chair: Peggy Lehman (DWR)

Location: Fred Farr Forum



7:30 Breakfast

8:15 Announcements

Session Six: Delta Fishes

Moderator: Kevin Fleming (DFG)

- 8:25 Andy Rockriver (DFG): Surveys and Exit Polls: Results from Six Years of Delta Smelt Monitoring
- 8:50 Russ Gartz (DFG): Tidal Stage Effects on the Distribution of Delta Smelt and Striped Bass
- 9:15 Kathy Kuivila (USGS): Exposure of Larval and Juvenile Delta Smelt to Dissolved Pesticides
- 9:40 Mark Bowen (USBR): Louver Efficiency Data as a Guide for Fish Separation at a New South Delta Facility



Session Seven: Lagniappe (A Little Something Extra)

Moderator: Lenny Grimaldo (DWR)

- 10:25 Rob Schroeter (UCD): A Twenty-one Year Glimpse into the Dynamics of the Suisun Marsh Fish Community
- 10:50 Matt Mesa (USGS): An Overview of Pacific Lamprey Research in the Columbia River Basin with an Emphasis on Dam Passage Issues
- 11:15 Anke Mueller-Solger (DWR): *Daphnia* Responses to Varying Food Resources in Two Contrasting California Flood Plains

11:40 IEP Workshop Wrap-up

Chuck Armor (DFG)

12:00 Lunch



IEP Poster Session Titles

Development of Genetic Markers for Stock Structure Analysis and Species Identification in Green Sturgeon (*Acipenser medirostris*)

M. Blumberg, G.J. Tranah, and B. May, Genomic Variation Laboratory, Department of Animal Science, University of California, Davis

Davis Temperature Preference and Metabolic Rate in Delta Smelt (*Hypomesus transpacificus*)

Stephanie N. Chun, Paciencia S. Young, and Joseph J. Cech, Jr., Department of Wildlife, Fish, and Conservation Biology, University of California, Davis, CA

Chemistry and Water Quality at the Tracy Fish Collection Facility: Recent Results

Doug Craft, Lee Mao, Brian Fowler, John Fields, Ron Housewright, and Bruce Moore
U.S. Bureau of Reclamation

Mercury Concentrations in Sport Fish from the Delta Region

Jay A. Davis and Ben Greenfield, SFEI; Gary Ichikawa and Mark Stephenson, Moss Landing Marine Lab; and Walter Jarman, University of Utah

Distribution of Prey (Copepods) to Predator (Delta Smelt) from the 20 mm Survey

Michael Dege, Department of Fish and Game, Stockton, CA

Long-term Trends in Fish Salvage at the SWP and CVP Facilities: Comparison Between Selected Native and Non-native Fishes

Steve Foss, Department of Fish and Game, Stockton, CA

Year Class Modeling of Striped Bass (*Morone saxatilis*) in the Sacramento-San Joaquin Estuary Using Pseudo-cohorts

Russ Gartz, Department of Fish and Game, Stockton, CA

Patterns of Adult Fish Use on the Yolo Bypass Floodplain

Bill C. Harrell and Ted R. Sommer, Department of Water Resources, Sacramento, CA

Sensitivity of Hydrodynamics and Salinity Response to Key Levee Breach Restoration Design Parameters

Callie Harrison, Department of Water Resources, Sacramento, CA

Phytoplankton and Nutrient Dynamics in the North and Central San Francisco Bay (Suisun, San Pablo and Central Bay)

V.E. Hogue, A.M. Lassiter, A. Marchi, F.P. Wilkerson, R.D. Dugdale, Romberg Tiburon Center, San Francisco State University

The Early Life-History, Growth and Recruitment Dynamics of Delta Smelt (*Hypomesus transpacificus*) in the San Francisco Bay-Delta Estuary

James A. Hobbs (1,2), David P. Martasian (2) and William Bennett (2)

1–Department of Wildlife Fish and Conservation Biology, University of California, Davis

2–Bodega Marine Laboratory, University of California, Davis

Investigations of Holding Conditions at Reclamation's Tracy Fish Facility

Cathy Karp, Lloyd Hess, Charlie Liston, and Diana Weigmann, U.S. Bureau of Reclamation



IEP Poster Session Titles

Investigations of a "Leaky Louver" at Separating Fish by Size

Cathy Karp, Joe Kubitschek, Charlie Liston, Diana Weigmann, U.S. Bureau of Reclamation

The 1999-2000 Suisun Marsh Vegetation Survey and Map: An Overview and Some Applications

Todd Keeler-Wolf, Department of Fish and Game

Severe Food Limitation in a Copepod of the Lower San Francisco Estuary

Wim Kimmerer and Carolina Peñalva, Romberg Tiburon Center, San Francisco State University

Distribution and Habitat Use of Steelhead in the Lower Feather River.

Jason Kindopp, Ryan Kurth and Brad Cavallo, Department of Water Resources, Sacramento, CA

Causes of Dissolved Oxygen Depletion in the San Joaquin River

P. W. Lehman, J. Sevier, J. Giulianotti and C. Ralston, Department of Water Resources, Sacramento, CA

Developing a Key to Identify Larval Delta Smelt and Wakasagi

Lisa M. Lynch, Department of Fish and Game, Stockton, CA

Green Sturgeon Responses to Stress: Modification by Time of Day and Temperature

Scott E. Lankford and Joseph J. Cech, Jr., Department of Wildlife, Fish, and Conservation Biology, University of California, Davis

2000 Sherman Island Agricultural Diversion Evaluation

Matt Nobriga, Zoltan Matica, and Alicia Seesholz, Department of Water Resources, Sacramento, CA

Green Sturgeon Bioenergetic Responses to Temperature

Ryan B. Mayfield and Joseph J. Cech, Jr., Department of Wildlife, Fish, and Conservation Biology, University of California, Davis

Long Term Monitoring Records Benthic Community Response to *Potamocorbula amurensis* Invasion

Heather Peterson, U.S. Geological Survey, Menlo Park, CA

Horizontal and Vertical Distribution of Larval Delta Smelt

Andy Rockriver, Department of Fish and Game, Stockton, CA

Floodplain as a Source of Phytoplankton for the San Francisco Estuary

Ted R. Sommer (1), Bill C. Harrell (1), Anke Mueller-Solger (1) and Larry Schemel (2)

1–Department of Water Resources, Sacramento, CA

2–U.S. Geological Survey, Menlo Park, CA

Temporal Variation in Water Quality and Organic Matter in the Yolo Bypass

L.E. Schemel (1), T.R. Sommer (2), M.H. Cox (2), A.B. Mueller-Solger (2), and W.C. Harrell (2)

1–U.S. Geological Survey, Menlo Park, CA

2–Department of Water Resources, Sacramento, CA

Effects of Tidal Current Phase at the Junction of Two Straits

John Warner (1), David Schoellhamer (2), Jon Burau (2) and Geoffrey Schladow (1)

1–University of California, Davis

2–U.S. Geological Survey, Sacramento, CA



IEP Poster Session Titles

Distribution of Selected Introduced Copepods and Mysids in the San Francisco Estuary
Mary Sommer, CA Department of Fish and Game, Stockton, CA

Evaluation of Adult Chinook Salmon Movement in the Lower San Joaquin River and South Delta
Derek Stein, California Department of Fish and Game, Stockton, CA

Effects of Environmental and Biological Factors on Fish Behavior and Performance near a Fish Screen: Further Insights from the Fish Treadmill Project
Christina Swanson, Paciencia S. Young, and Joseph J. Cech, Jr., Department of Wildlife, Fish, and Conservation Biology, University of California, Davis

Impacts of Non-Indigenous Species on Subtidal Benthic Assemblages in the San Francisco Estuary
Bruce Thompson (1) and Sarah Lowe (1) and Henry Lee III (2)
1—San Francisco Estuary Institute, Alameda, CA
2—U.S. Environmental Protection Agency, Newport, OR

Habitat Use of the Chinese Mitten Crab in the Sacramento-San Joaquin Delta
Tanya Veldhuizen, Department of Water Resources, Sacramento, CA

Evaluation of Sampling Methods for the Chinese Mitten Crab
Tanya Veldhuizen, Cindy Messer, Karen Gerhts, Jody Sears, and Gavin O'Leary
Department of Water Resources, Sacramento, CA

Access to the Bay-Delta and Tributaries Data Using an Internet Browser
Marc Vayssières, Department of Water Resources, Sacramento, CA

An Overlook of Telemetry Studies at the Suisun Marsh Salinity Control Gates
Robert Vincik, Department of Fish and Game, Stockton, CA

Fall and Winter Juvenile Chinook Salmon Decision Process
Jim White (1), Bruce Herbold (2), Marty Kjelson (3), Jeff McLain (3) and Sheila Green (4)
1—Department of Fish and Game, Stockton, CA
2—U.S. Environmental Protection Agency, San Francisco, CA
3—U.S. Fish and Wildlife Service, Stockton, CA
4—Department of Water Resources, Sacramento, CA

Stress Responses of Young Chinook Salmon Exposed to a Fish Screen: Preliminary Results
Paciencia S. Young, Christina Swanson, and Joseph J. Cech, Jr.
Department of Wildlife, Fish, and Conservation Biology, University of California, Davis

The DWR and USBR Compliance Monitoring and Analysis Program: A Twenty-Two Year History of Water Quality and Biota in the Bay-Delta System
Scott Waller, Department of Water Resources, Sacramento, CA

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