

# AGENDA

## Interagency Ecological Program Annual Workshop

and

## Bay-Delta Modeling Forum Annual Meeting & Workshop

February 26 - March 1, 2002

Asilomar Conference Center  
800 Asilomar Avenue P.O. Box 537  
Pacific Grove, California 93950  
(408) 372-8016

Tuesday, February 26

---

**Bay-Delta Modeling Forum**  
Pre-Meeting Concurrent Breakout Sessions  
10:15 am - 12:00 pm

**Breakout Session One**

Integrated Groundwater and Surface Water Simulation Model (IGSM)  
Tariq Kadir, Moderator  
Chapel

IGSM Theoretical Consideration and Field Applications . . . . . Saquib Najmus, Ali Taghavi  
IGSM Peer Review by the Bay-Delta Modeling Forum . . . . . Graham Fogg  
IGSM/CVGSM Theoretical  
Review and Documentation by DWR . . . . . Emin Dogrul, Monica Martin, Michael Moncrief  
DWR/USBR Integrated Hydrology Modeling: An Overview . . . . . Francis Chung, Ron Milligan  
DWR/USBR Integrated Hydrology Modeling: Approach and Process . . . . . George Matanga

**Breakout Session Two**

Delta Simulation Model 2 Enhancements  
Tara Smith, Moderator  
Chapel

Planning Studies with Daily Hydrology and Non-Repeating Tides . . . . Bijaya Shrestha, Parviz Nader  
New Delta Simulation Model 2 Database  
and Data Input System . . . . . Eli Ateljevich, Tawnly Pranger, Ralph Finch  
Particle Tracking Model Validation . . . . . Aaron Miller, Tara Smith  
Delta Simulation Model 2 Made Easy . . . . . Jamie Anderson, Bob Suits

**12:00 - 1:00 pm Lunch**



**Bay-Delta Modeling Forum**  
Pre-Meeting Concurrent Breakout Sessions  
1:15 - 3:15 pm

**Breakout Session Three**  
CALSIM II  
Sushil Arora, Moderator  
Fred Farr Forum

- Update on the CALSIM II Model Developments . . . . . Joel Fenolio, Andy Draper  
Water Accounts, A Changing Paradigm . . . . . Armin Munevar  
Linked Daily-Monthly CALSIM II Model for In-Delta Storage Operations . . . . . Dan Easton  
A Joint CALFED-USBR-DWR Modeling Effort for CALFED's Water Management  
and Allocation Studies . . . . . Rob Leaf, Erik Reyes, Mike Burnham, Nancy Parker  
CALSIM II Modeling of Water Supply Costs of G-Model  
and ANN Delta Outflow-Salinity Approaches . . . . . Ryan Wilbur, Paul Hutton

**Breakout Session Four**  
Gaming for Water  
Walter Bourez, Moderator  
Chapel

- Gaming in California: Sacramento Basin, San Joaquin River Restoration Project  
and Madera Irrigation District . . . . . Walter Bourez  
Gaming Environmental Water Account for Fish Protection  
and San Joaquin River for Fish Protection. . . . . Russ Brown  
Gaming: HydroLogics' Experience Using Performance Measures, Operations,  
Exercises and Computer-Aided Negotiation to Solve Real Problems . . . . . Harold Meyer

**Breakout Session Five**  
Water Quality Modeling  
Mike Deas, Moderator  
Sanderling

- Water Temperature and Dissolved Oxygen Studies for the In-Delta Storage Project . . Ken Yokoyama  
Dissolved Oxygen Modeling in the San Joaquin River  
in the Vicinity of the Stockton Shipping Channel . . . . . Hari Rajbhandari  
San Joaquin River Dissolved Oxygen Modeling . . . . . Carl Chen  
Another speaker TBA

**3:20 - 4:00 pm Bay-Delta Modeling Forum Registration**



Tuesday, February 26

---

**Bay-Delta Modeling Forum**  
Pre-Meeting Concurrent Breakout Sessions  
4:00 - 6:00 pm

**Breakout Session Six**  
Geomorphic Modeling  
Peter Baker and Peter Downs, Moderators  
Fred Farr Forum

Magnitude Frequency Modeling Related to Channel Change . . . . . Roy Richardson, Peter Downs  
Short-Term Effects of Dam Removal on Salmon Survival . . . . . Yantao Cui, Peter Baker  
Modeling Meander Migration . . . . . Eric Larsen  
Hydraulic Modeling and River Restoration . . . . . Mike MacWilliams

**Breakout Session Seven**  
Modeling for Bulletin 160  
Mohammad Rayej, Moderator  
Chapel

Overview of Modeling Needs for B160 Process . . . . . Kamyar Guivetchi  
Development of Year 2030 Hydrology . . . . . Andy Draper  
Presentation of IWR–Main Urban Model. . . . . Scott Matyac  
Presentation of CALAG . . . . . Farhad Frarnam  
CALVIN Results . . . . . Jay Lund

**Breakout Session Eight**  
Modeling California’s Colorado River Entitlement  
John Eckhardt, Moderator  
Toyon

Change in Point of Diversion on the Colorado River:  
Effects of Water Use Transfers from Hoover Dam NIB . . . . . Terry Fulp  
Modeling On-Farm Water Conservation in the IIDSS . . . . . Dave Miller  
Agricultural Water Use Modeling for the Imperial Irrigation District  
Using GIS and Database Programming. . . . . Tim Hill, Chris Goz  
Modeling Effects of Water Transfers from the Imperial Valley on the Salton Sea . . . . . Paul Weghorst

**6:00 - 7:00 pm Dinner**

**Forum Social and Evening Program**  
7:00 pm, Chapel

7:30 Presentation of the Hugo B. Fisher Award  
7:40 Remarks by the Hugo B. Fisher Award Recipient  
8:00 Groundwater Flowing in Known and Definite Channels:  
A New Look at an Old Law . . . . . Joseph L. Sax, Boalt Hall School of Law



Wednesday, February 27

---

**Bay-Delta Modeling Forum Plenary Session**

Rich Satkowski, Moderator

Chapel

8:15 - 10:00 am

8:15 Welcome ..... Rich Satkowski

Reports on Forum-Sponsored Peer Review Activities

8:20 Literature Review Regarding Effects of Water Temperature  
on Salmon and Steelhead ..... Rich Satkowski

8:25 One-Dimensional Hydrodynamic Model Review ..... Pete Smith

8:30 Review of Water Temperature Models ..... Mike Deas, Cindy Lowney

8:35 Review of the Integrated Groundwater and Surface Water Simulation Model ..... Nigel Quinn

8:50 Review of Models Used for Instream Flow Assessment ..... John Williams

9:00 Bay-Delta Modeling Forum Workshops and Discussions  
of Future Reviews and Workshops ..... Nigel Quinn

9:15 Executive Director's Report ..... John Williams

9:30 Business Meeting

Ratification of Name Change to "California Water and Environmental Modeling Forum"

Election of Officers

Election of Steering Committee

10:00 Adjourn

**10:00 - 10:25 pm Break**



Wednesday, February 27

---

**Bay-Delta Modeling Forum**

Concurrent Breakout Sessions

10:25 am - 12:05 pm

**Breakout Session One**

Salmon Modeling

Brad Cavallo, Moderator

Fred Farr Forum

Structural Time Series Models of Salmon Population Dynamics . . . . . Steve Lindley

Using Life History Models to Assess the Roles of Resources  
and Population Size in Restoration . . . . . Marc Mangel, et al.

“Viable Salmonid Populations” as a Conceptual Framework  
for Recovery Planning: Where’s the Modeling? . . . . . Eric Bjorkstedt

**Breakout Session Two**

Modeling In-Delta Storage

Paul Hutton, Moderator

Chapel

In-Delta Storage Reservoir Modeling: Peat Soil Interactions . . . . . Marvin Jung

In-Delta Reservoir Modeling: Primary Productivity . . . . . Robert Duvall

Simulating Dissolved Organic Carbon Transport  
with Delta Simulation Model 2 . . . . . Parviz Nader, Ganesh Pandey, Jamie Anderson

In-Delta Storage Alternatives Analysis with Delta Simulation Model 2 . . . . Michael Mierzwa, Tara Smith

Predicting Delta Export Water Quality with Characteristic Flow . . . . . Chuching Wang

**Breakout Session Three**

Managing Conjunctive Use

Ali Taghavi, Moderator

Toyon

DWR’s Conjunctive Water Management Program and Our Experience in Yolo County . . . . Rich Juricich

The Role of Reclaimed Water in Planning and Operation  
of Conjunctive Use Projects in Southern California . . . . . Behrooz Mortazavi

Analytical Tools for Evaluation of Conjunctive Use Projects . . . . . Ali Taghavi

**12:05 - 1:00 pm Lunch**



## Interagency Ecological Program Workshop

### IEP Workshop Session One

Program Overview

Chuck Armor, Moderator

Chapel

1:00 - 2:20 pm

- 1:00 Welcome, Introduction, Science Consortium and IEP Update . . . . . Chuck Armor  
1:20 CALFED Science Program Update . . . . . Sam Luoma  
1:45 Fish Facilities Program Overview . . . . . Darryl Hayes  
2:05 Modeling Forum News . . . . . Rich Satkowski

**2:20 - 2:40 pm Break**

### IEP Workshop Session Two

A Glimpse Back at the First Year of the Environmental Water Account:

The Progression from Crisis to Action

(A Joint BMDF-IEP Session)

Zach Hymanson, Moderator

Chapel

2:40 - 4:00 pm

- 2:40 Translating Environmental Crises into Policy . . . . . Tim Quinn  
3:00 Improving Protection for Delta-Dependent Fish  
with the CALFED Environmental Water Account: The Early Years . . . . . Jim White  
3:30 Science and the Environmental Water Account:  
Is It Doing Any Good, and Can We Tell? . . . . . Wim Kimmerer  
3:50 Questions and Answers

**4:00 - 6:00 pm Room Registration**



Wednesday, February 27

---

**IEP Workshop and Bay-Delta Modeling Forum**

Concurrent Breakout Sessions

4:15 - 6:00 pm

**Breakout Session One**

Climate Change

Nigel Quinn, Moderator

Toyon

- Studies of the Impact of Climate Change on California Hydrology:  
Some Preliminary Results . . . . . M.L. Kavvas, Z.Q. Chen, M.L. Anderson
- Global Climate Change Impacts on the Hydrology and Water Quality  
of the San Joaquin River Basin. . . . . L.D. Brekke, L.H. Hidalgo, N.T. Quinn, J.A. Dracup, N.L. Miller
- Climate Change Sensitivity Study of California Hydrology . . . . . Norman Miller, Kathy Bashford, Eric Strem

**Breakout Session Two**

Delta Cross Channel Studies

Bruce Herbold, Moderator

Chapel

- Management Questions Addressed by this Year's Studies  
at the Delta Cross Channel . . . . . Bruce Herbold
- Salt Loading, Water Quality, and Hydrodynamic Effects  
of Delta Cross Channel Gate Operations . . . . . Jon Burau, Cathy Ruhl
- Migration Pathways of Adult Salmon and the Effects  
of Different Delta Cross Channel Gate Operations . . . . . Derek Stein, Geir Aasen
- Migratory Paths of Individual Adult Salmon Through the Delta. . . . . Dave Vogel
- Tracking and Trapping Adult Salmon Along Different Migratory Paths  
and Patterns of Predation on Juvenile Salmon . . . . . Jeff McLain
- Quantifying Adult Salmon Passage Rates and Habitat Selection  
Using Hydroacoustic Tracking . . . . . Mike Horn
- Tidal and Diel Effects on the Passage of Masses of Juvenile Coded Wire Tagged Salmon  
into the Delta Cross Channel . . . . . Mark Pierce
- Tidal and Diel Effects on the Migration Pathways of Individual Juvenile Salmon . . . . . Dave Vogel

(more concurrent breakout sessions on next page)





Wednesday, February 27

---

**IEP Workshop and Bay-Delta Modeling Forum**

Concurrent Breakout Sessions

4:15 - 6:00 pm

**Breakout Session Three**

Operations versus Planning Models

Rob Tull, Moderator

Sanderling

CALSIM Model Application to the Klamath Basin. . . . . Nancy Parker

Challenges of Operations Forecasting. . . . . Ann Lubas-Williams

Incorporation of Water Quality Issues in Planning Models. . . . . Rob Leaf

**Breakout Session Four**

What the IEP Science Has to Say About Fish and Delta Water Project Operations

B.J. Miller, Moderator

Acacia

Presenters . . . . . B.J. Miller and Tom Mongan

Responders . . . . . Wim Kimmerer and Resources Agency representative (TBA)

**6:00 - 7:00 pm Dinner**

**Featured Speaker and Evening Social**

Chapel

7:00 - 9:00 pm

Keeping Tahoe Blue: The Essential Role of Long-Term Environmental Monitoring

Charles Goldman, U.C. Davis



**7:30 am Breakfast**

**8:15 am Announcements**

Chuck Armor  
Chapel

**IEP Workshop Session Three**

You Are What You Eat: Food Web and Stable Isotopes

Lenny Grimaldo, Moderator  
Chapel

8:20 - 10:00 am

- 8:20 The Basis for Stable Isotope Biomarkers in Estuarine Food Web Research:  
Are You Really What You Eat (Two to Four Times Removed)? . . . . . Si Simenstad
- 8:40 Back to the Source: Can Isotopes Tell Us the Origin  
of Organic Matter That Fuels Biological Production in the Bay-Delta? . . Elizabeth Canuel
- 9:00 Sources of Organic Matter in the Sacramento-San Joaquin River Delta:  
Insights Gained from Coupled Biomarker-Stable Isotope Studies . . . . . Elizabeth Canuel
- 9:20 Using Stable Isotopes to Reveal Carbon Sources and Trophic Structure  
of Fish and Invertebrates in the Sacramento-San Joaquin Delta:  
Do You Eat Where You Live? . . . . . Lenny Grimaldo, Wim Kimmerer
- 9:40 Quantifying Ecosystem Processes in Contaminants Research  
Using Stable Isotopes . . . . . Robin Stewart

**10:00 - 10:20 am Break**

**IEP Workshop Session Four**

Estuarine Monitoring Program Review

Anke Mueller-Solger, Moderator  
Chapel

10:20 am - 12:00 pm

- 10:20 Estuarine Monitoring Program Makeover: An Innovative Approach . . . . . Zach Hymanson
- 10:50 Estuarine Monitoring Program Makeover Results:  
Rejuvenating a Long-Term Interagency Monitoring Program . . . . . Anke Mueller-Solger
- 11:20 Questions and Answers

**12:00 - 1:00 pm Lunch**



Thursday, February 28

---

**IEP Workshop Session Five**

San Joaquin River Adaptive Management Strategies:  
Vernalis Adaptive Management Program/Head of Old River

Jon Burau, Moderator

Chapel

1:00 - 2:20 pm

- 1:00 The Head of Old River and the Vernalis Adaptive Management Program . . . . . Pat Brandes  
1:20 Hydrodynamic Investigations: Design and Results . . . . . Jay Cuetara  
1:40 Fish Hydroacoustics: Design and Results . . . . . Mike Simpson  
2:00 Head of Old River Fisheries Monitoring: Design and Results . . . . . Jim Starr

**2:20 - 6:00 pm Break**

**6:00 pm Dinner**

**Poster Session and Evening Social**

Fred Farr Forum

7:15 pm



**7:30 am Breakfast**

**8:15 am Announcements**

Chuck Armor  
Chapel

**IEP Workshop Session Six**

Tidal Marsh Studies  
Laurie Briden, Moderator  
Chapel  
8:20 - 10:00 am

- 8:20 Vegetation Mapping and Monitoring in the Suisun Marsh . . . . . Todd Keeler-Wolf  
8:45 Salt Marsh Harvest Mouse Monitoring in the Suisun Marsh:  
A Summary of Activities. . . . . Lauren Barthman  
9:10 San Francisco Estuary Tidal Marsh Restoration:  
Deconstruction and Reconstruction . . . . . Steve Culberson  
9:35 Telemetry Study of Salmon Passage  
through the Salinity Control Gates . . . . . Robert Vincik, Callie Harrison

**10:00 - 10:20 am Break**

**IEP Workshop Session Seven**

Fish Factoids  
Paul Cadrett, Moderator  
Chapel  
10:20 - 11:35 am

- 10:20 Green Sturgeon: An Overview and Recent Findings . . . . . Raymond Schaffter  
10:45 Summary of the Winter-Run Genetic Characterization Project  
and Update on the Spring-Run Genetic Characterization Project . . . . . Erin Chappell  
11:10 Tidal and Diel Variability through Screened and Unscreened  
Agricultural Diversions in the Lower Sacramento River . . . . . Matt Nobriga

**11:35 am IEP Workshop Wrap-Up**

Chuck Armor  
Chapel

**11:45 am Departure**



**Transportation and Release at the Skinner Fish Protective Facility 1999–2000:  
An Overview of the Effects of Trucking and Handling**

Virginia Afentoulis, California Department of Fish and Game

**The Effects of Temperature on Growth and Survival of Delta Smelt Larvae and Juveniles**

B. Baskerville-Bridges, J. Lindberg, J. Van Eenennaam, and S. Doroshov

University of California, Davis

**Horizontal Bar Separator Flume Research to Segregate Delta Fish by Species and Size**

Mark Bowen, Leslie Hanna, Brent Mefford, Raymond Bark, and Rafael Lopez

U.S. Bureau of Reclamation

**Shallow Water Habitat Restoration in the North Delta–Prospect Island**

Delores Brown (1), Tim Kelleher (2), Walt Hoye (3), Dave Mraz (1), Tom Harvey (4),

Lee Laurence (5), and Frank Wernette (6)

1–California Department of Water Resources

2–U.S. Army Corps of Engineers

3–California Urban Water Agencies Bay-Delta Category III Program

4–U.S. Fish and Wildlife Service

5–U.S. Bureau of Reclamation

6–California Department of Fish and Game

**Restoring the Natural Production of Anadromous Fish in the Cosumnes and Mokelumne Rivers**

Gonzalo Castillo (1), Jeff McLain (1), and Erwin Van Nieuwenhuysse (2)

1–U.S. Fish and Wildlife Service

2–U.S. Bureau of Reclamation

**Performance Comparison of Minnow Seines, Blocknets, and Boat-Mounted Electrofishing Rigs  
in Open Delta Shore Habitats**

Mike Chotkowski, U.S. Bureau of Reclamation

**Water Quality-Food Resource Dynamics in Central Valley Rivers**

Randy Dahlgren, Zengshou Yu, and Erwin Van Nieuwenhuysse

U.S. Bureau of Reclamation

**Spring Chlorophyll Blooms in Suisun and San Pablo Bays: The Influence of the  
Nitrate-Ammonium Balance**

Richard Dugdale, Frances Wilkerson, Victoria Hogue

San Francisco State University, Romberg Tiburon Center

**Early Life History of Fishes in the San Francisco Estuary and Watershed:  
A Symposium and Volume**

Fred Feyrer, California Department of Water Resources

**Fish Communities in Perennial Floodplain Ponds of the Yolo Bypass**

Fred Feyrer, California Department of Water Resources

**Small Scale Spatial Variability of Macroinvertebrates in the Central Delta**

Karen Gehrts, California Department of Water Resources

**The Newly Introduced Shokihaze Goby, *Tridentiger barbatus* (Gunther),  
in the San Francisco Estuary**

Thomas A. Greiner, California Department of Fish and Game

**Evaluation of a Hydrostal Pump for Fish Passage at Water Export Facilities**

Louis Helfrich (1), Raymond Bark (2), Charles Liston (2), Brent Mefford (2), and Diana Weigmann (2)  
1-Virginia Polytechnical Institute and State University  
2-U.S. Bureau of Reclamation

**Fish Holding Conditions at Reclamation's Tracy Fish Facility**

Cathy Karp, Lloyd Hess, and Judy Lyons: U.S. Bureau of Reclamation

**Oxygen Depletion in the San Joaquin River**

P. Lehman, J. Giulianotti, J. Sevier, S. Ross, and M. Johnson  
California Department of Water Resources

**Frank and Millie's Secrets Revealed: Comparison of "Similar" Shallow Tidal Habitats in the Sacramento-San Joaquin River Delta**

Lisa V. Lucas, James E. Cloern, Janet K. Thompson, and Nancy E. Monsen: U.S. Geological Survey

**An Evaluation of the Potential Impacts of the Chinese Mitten Crab on the Benthic Community in the Sacramento-San Joaquin Delta**

Cindy Messer and Jody Sears, California Department of Water Resources

**Food Limitation of *Acartia* in the San Francisco Estuary Due to a Benthic Competitor**

Mary Helen Nicolini, Wim Kimmerer, Nissa Ferm, and Carolina Peñalva: SFSU, Romberg Tiburon Center

**Assessing the Impacts of Potential Conjunctive Use of Groundwater in the San Joaquin Basin on Drainage, Streamflow, and Land Subsidence Using ESTSIM**

Nigel T. Quinn, Claire Y. Jacquemin, Jonathan D. Goetz, Lisa Gessford: U.S. Bureau of Reclamation

**Development of a Toxicity Testing Protocol using the Estuarine Amphipod *Gammarus daiberi***

Philipp Rosenkranz, Linda Deanovic, and Inge Werner: University of California, Davis

**Mudflat Community Trends Compared with Decreasing Trace Metal Loading in South San Francisco Bay**

Michelle K. Shouse, U.S. Geological Survey

**Spawning and Rearing of Splittail in a Model Floodplain Wetland**

Ted R. Sommer, Louise Conrad, Gavin O'Leary, Frederick Feyrer, and William C. Harrell  
California Department of Water Resources

**The Restoration of Riparian Habitat, Channel and Floodplain on the Merced River**

Stephani Spaar and Randall C. Mager, California Department of Water Resources

**A Fully-Integrated Surface and Subsurface Water Flow and Solute Transport Model**

Edward A. Sudicky (1), Joel E. VanderKwaak (2), George B. Matanga (3), Nigel W. Quinn (3), and Claire Y. Jacquemin (3)

1-University of Waterloo, Canada

2-Integrated Hydrology

3-U.S. Bureau of Reclamation

**Acute and Chronic Effects of Diazinon and Esfenvalerate on Sacramento Splittail (*Pogonichthys macrolepidotus*) Larvae**

Swee Joo Teh, University of California, Davis

**Benthic Grazer Food Sources in North Bay as Defined by Bivalve Growth, Stable Isotopes, and Physical Processes**

J. K. Thompson, A. R. Stewart, F. Parchaso, J. R. Burau, and D. H. Schoellhamer: U.S. Geological Survey

## Speakers, Moderators\*, and Affiliations

---

Geir Aasen . . . . .	California Department of Fish and Game
Jamie Anderson . . . . .	California Department of Water Resources
Michael L. Anderson . . . . .	University of California, Davis
Chuck Armor* . . . . .	California Department of Fish and Game
Sushil Arora* . . . . .	California Department of Water Resources
Eli Ateljevich . . . . .	California Department of Water Resources
Peter Baker* . . . . .	Stillwater Sciences
Laureen Barthman . . . . .	California Department of Fish and Game
Kathy Bashford . . . . .	Lawrence Berkeley National Laboratory
Eric Bjorkstedt . . . . .	National Marine Fisheries Service
Walter Bourez* . . . . .	MBK Engineers
Pat Brandes . . . . .	U.S. Fish and Wildlife Service
L.D. Brekke . . . . .	University of California, Berkeley
Laurie Briden* . . . . .	California Department of Fish and Game
Russ Brown . . . . .	Jones & Stokes Associates, Inc.
Jon Burau . . . . .	U.S. Geological Survey
Mike Burnham . . . . .	CALFED Bay-Delta Program
Paul Cadrett* . . . . .	U.S. Fish and Wildlife Service
Elizabeth Canuel . . . . .	Virginia Institute of Marine Sciences
Brad Cavallo* . . . . .	California Department of Water Resources
Erin Chappell . . . . .	California Department of Water Resources
Carl Chen . . . . .	Systech Engineering, Inc.
Z.Q. Chen . . . . .	University of California, Davis
Francis Chung . . . . .	California Department of Water Resources
Jay Cuetara . . . . .	U.S. Geological Survey
Steve Culberson . . . . .	California Department of Water Resources
Yantao Cui . . . . .	Stillwater Sciences
Mike Deas* . . . . .	Watercourse Engineering, Inc.
Emin Dogrul . . . . .	California Department of Water Resources
Peter Downs* . . . . .	Philip Williams & Associates
John A. Dracup . . . . .	University of California, Berkeley
Andy Draper . . . . .	California Department of Water Resources
Robert Duvall . . . . .	California Department of Water Resources
Dan Easton . . . . .	California Department of Water Resources
John Eckhardt* . . . . .	CH2M Hill
Joel Fenolio . . . . .	California Department of Water Resources
Ralph Finch . . . . .	California Department of Water Resources
Graham Fogg . . . . .	University of California, Davis
Farhad Frarnam . . . . .	California Department of Water Resources
Terry Fulp . . . . .	U.S. Bureau of Reclamation
Charles Goldman . . . . .	University of California, Davis
Chris Goz . . . . .	CH2M Hill
Lenny Grimaldo* . . . . .	California Department of Water Resources
Kamyar Guivetchi . . . . .	California Department of Water Resources
Callie Harrison . . . . .	California Department of Water Resources
Darryl Hayes . . . . .	CH2M Hill
Bruce Herbold* . . . . .	U.S. Environmental Protection Agency
L.H. Hidalgo . . . . .	University of California, Berkeley
Tim Hill . . . . .	CH2M Hill
Mike Horn . . . . .	U.S. Bureau of Reclamation
Paul Hutton* . . . . .	California Department of Water Resources
Zach Hymanson* . . . . .	California Department of Water Resources
Marvin Jung . . . . .	Marvin Jung & Associates
Rich Juricich . . . . .	California Department of Water Resources
Tariq Kadir* . . . . .	California Department of Water Resources
M.L. Kavvas . . . . .	University of California, Davis
Todd Keeler-Wolf . . . . .	California Department of Fish and Game
Wim Kimmerer . . . . .	San Francisco State University, Romberg Tiburon Center
Eric Larsen . . . . .	University of California, Davis

Rob Leaf	CH2M Hill
Steve Lindley	National Marine Fisheries Service
Cindy Lowney	University of San Francisco
Ann Lubas-Williams	U.S. Bureau of Reclamation
Jay Lund	University of California, Davis
Sam Luoma	CALFED Bay-Delta Program
Mike MacWilliams	Stanford University
Marc Mangel	University of California, Santa Cruz
Monica Martin	California Department of Water Resources
George Matanga	U.S. Bureau of Reclamation
Scott Matyac	California Department of Water Resources
Jeff McLain	U.S. Fish and Wildlife Service
Harold Meyer	HydroLogics
Michael Mierzwa	California Department of Water Resources
Aaron Miller	California Department of Water Resources
Dave Miller	David's Engineering, Inc.
Norman L. Miller	Lawrence Berkeley National Laboratory
B.J. Miller*	Consultant
Ron Milligan	U.S. Bureau of Reclamation
Michael Moncrief	California Department of Water Resources
Tom Mongan	Consultant
Behrooz Mortazavi	Eastern Municipal Water District
Anke Mueller-Solger*	California Department of Water Resources
Armin Munevar	CH2M Hill
Parviz Nader	California Department of Water Resources
Saqib Najmus	Water Resources and Information Management Engineering, Inc.
Matt Nobriga	California Department of Water Resources
Ganesh Pandey	California Department of Water Resources
Nancy Parker	U.S. Bureau of Reclamation
Mark Pierce	U.S. Fish and Wildlife Service
Tawnly Pranger	California Department of Water Resources
Tim Quinn	Metropolitan Water District of Southern California
Nigel T. Quinn*	Lawrence Berkeley National Laboratory
Hari Rajbhandari	California Department of Water Resources
Mohammad Rayej*	California Department of Water Resources
Erik Reyes	California Department of Water Resources
Roy Richardson	Philip Williams & Associates
Cathy Ruhl	U.S. Geological Survey
Rich Satkowski*	State Water Resources Control Board
Joseph L. Sax	Boalt Hall School of Law
Raymond Schaffter	California Department of Fish and Game
Bijaya Shrestha	California Department of Water Resources
Si Simenstad	University of Washington
Mike Simpson	U.S. Geological Survey
Pete Smith	U.S. Geological Survey
Tara Smith*	California Department of Water Resources
Jim Starr	California Department of Fish and Game
Derek Stein	California Department of Fish and Game
Robin Stewart	U.S. Geological Survey
Eric Strem	Lawrence Berkeley National Laboratory
Bob Suits	California Department of Water Resources
Ali Taghavi*	Water Resources and Information Management Engineering, Inc.
Rob Tull*	CH2M Hill
Robert Vincik	California Department of Fish and Game
Dave Vogel	Natural Resource Scientists, Inc.
Chuching Wang	Metropolitan Water District of Southern California
Paul Weghorst	U.S. Bureau of Reclamation
Jim White	California Department of Fish and Game
Ryan Wilbur	California Department of Water Resources
John Williams	Bay-Delta Modeling Forum
Ken Yokoyama	U.S. Bureau of Reclamation



## Notes

---

# Map

