

SUMMARY OF SESSIONS

Monday, April 17

Time	Session	Moderator	Room
8:00 – 8:30	Registration		Sierra Hallway
8:30 – 10:15	1. CalSim-Callite Developments & Applications	Nicole Osorio	Pavilion
	2. Fine-Grid California Central Valley Groundwater-Surface Water Simulation Model Updates	Tyler Hatch	Sierra 1
	3. Adoption of CWEMF’s Modeling Protocols in California: Review and Case Studies	Sujoy Roy	Folsom/Natoma
10:15 - 10:30	Break		
10:30 - 12:15	4. Central Valley Project Water Temperature Modeling Platform	Yung-Hsin Sun	Pavilion
	5. Airborne Electromagnetic (AEM) Data Applications in Groundwater Models	Mesut Cayar	Sierra 1
	6. Data, Tools, and Innovations in the California Water Plan Update 2023	Abdul Khan	Folsom/Natoma
12:15 – 1:00	Lunch - Included in registration fee		Restaurant
1:00 – 2:00	7. CWEMF Awards Ceremony	Jesse Jankowski	Pavilion
2:00 – 2:05	Break		
2:05 – 3:15	8. Pop-up Talks	Stacy Tanaka & Nigel Quinn	Pavilion
3:15 – 3:30	Break		
3:30 – 5:15	9. Delta Ecosystem modeling and Applications to Regional SAN Upgrade	Joseph Zhang	Pavilion
	10. Modeling Analysis Tools for Groundwater Recharge and Recovery	Hai Huang & Brad Bessinger	Sierra 1
	11. Deep Dive on Shasta Operations	Derya Sumer	Folsom/Natoma
5:30 - 8:00	12. Business Meeting and Social	Tariq Kadir	Cliff House of Folsom

SUMMARY OF SESSIONS

Tuesday, April 18

Time	Session	Moderator	Room
7:30 - 8:00	Registration		Sierra Hallway
8:00 - 9:45	13. Flood Modeling: Extreme Flood Events under Climate Change in California	Samson Haile-Selassie	Pavilion
	14. Enhancements to the Integrated Water Flow Model (IWFM) and its Support Tools	Can Dogrul	Sierra 1
	15. Delta Hydrodynamics and Ecology	Xiaochun Wang	Folsom/Natoma
9:45 - 10:00	Break		
10:00 - 11:45	16. CalSim 3 Development	Nancy Parker	Pavilion
	17. Modeling Nonpoint Source Pollution in California Aquifers Across Scales	Thomas Harter	Sierra 1
	18. Open Data -- Putting Water Data to Work	Christina McCready	Folsom/Natoma
11:45 - 12:30	Lunch - Included in registration fee		Restaurant
12:30 - 1:10	19. Keynote Address – TBD	Tariq Kadir	Pavilion
1:10 - 1:15	Break		
1:15 – 3:00	20. Salinity and Drought Modeling in the Bay-Delta	Eli Ateljevich	Pavilion
	21. Coordinated Efforts to Model and Characterize Interbasin Groundwater Flow	Reza Namvar	Sierra 1
	22. Ecosystem Grab Bag	Katherine Heidel	Folsom/Natoma
3:00 - 3:15	Break		
3:15 - 5:00	23. Integrating Biological Effects into Environmental Modeling	Josh Israel	Pavilion
	24. Integrated Groundwater Models: Improving Land Surface Processes	Dominick Amador	Sierra 1
	25. Supply/Ops/Hydrology Grab Bag	Yuchuan Lai	Folsom/Natoma
5:00 - 7:00	26. Poster Session * & Social	Stacy Tanaka	Sierra 1

* Posters will be set up by 10:00 am and available for viewing all day. Presenters will be available from 5:00 to 7:00 pm.

SUMMARY OF SESSIONS

Wednesday, April 19

Time	Session	Moderator	Room
7:30 - 8:00	Registration		Sierra Hallway
8:00 - 9:45	27. Challenges in Recent CalSim 3 Hydrology Development, Part 1	Hongbing Yin	Pavilion
	28. Capturing Nuances of Surface Water/Groundwater Interactions to Quantify Stream Depletion	Gilbert Barth	Sierra 1
	29. Temperature Modeling Nexus Grab Bag	Benjamin Bray	Folsom/Natoma
9:45 - 10:00	Break		
10:00 - 11:45	30. Data, Data Everywhere: How to use it best	Frank Qian	Pavilion
	31. Groundwater Sustainability Beyond California	Steffen Mehl	Sierra 1
	32. Surface Transport Modeling Issues Related to EC, Practical Salinity and Major Ions	Sujoy Roy	Folsom/Natoma
11:45 - 1:15	Lunch at area restaurants		
1:15 - 3:00	33. Modeling for HABs Decision Support	John Bratton	Pavilion
	34. Groundwater Grab Bag	Jon Traum	Sierra 1
	35. Climate Change Modeling	Kunxuan Wang	Folsom/Natoma
3:00 - 3:15	Break		
3:15 - 5:00	36. Challenges in Recent CalSim 3 Hydrology Development, Part 2	Z. Richard Chen	Pavilion
	37. Land Subsidence in California	Vivek Bedekar	Sierra 1
	38. Temperature Modeling	Drew Loney	Folsom/Natoma

AGENDA

Monday, April 17

8:00 – 8:30 a.m. – Registration in Sierra Hallway

Refreshments sponsored by LimnoTech

8:30 – 10:15 a.m.

Session 1. CalSim-CalLite Developments & Applications

Moderator: Nicole Osorio (DWR)

Location: Pavilion

1. 2023 Delivery Capability Report Efforts – Nazrul Islam & Nicole Osorio (DWR)
2. Modifying Spatial Distribution to Representation of California Aqueduct – Rafael Herrera Jr. (Stantec)
3. Yuba River CalSim Model Updates – Jeffrey Weaver & Megan Lionberger (HDR)
4. CalLite Model and GUI Update – Yiwei Cheng (DWR) & Hayley Huerd (HDR)

Session 2. Fine-Grid California Central Valley Groundwater-Surface Water Simulation Model Updates

Moderator: Tyler Hatch (DWR)

Location: Sierra 1

1. Development of the Historical Land Use and Evapotranspiration for C2VSimFG – Lan Liang (DWR)
2. Investigating and Improving the Stratigraphy and Conceptual Model of C2VSimFG – Behrooz Etebari (DWR)
3. Improved Representations of Surface Water Inflows and Diversions in C2VSimFG – Guobiao Huang (DWR)
4. Cluster Analysis of Groundwater Quality in the Sacramento Valley: A Case Study of Type-Chemistry – Kyle Hardage (DWR)

Session 3. Adoption of CWEMF's Modeling Protocols in California: Review and Case Studies

Moderator: Sujoy Roy (Tetra Tech)

Location: Folsom/Natoma

1. Modeling Study Protocols used by the California Department of Water Resources – Abdul Khan (DWR)
2. Supporting Model Development and Application Using a Data Management System – Mike Deas (Watercourse Engineering)
3. Aligning climate change analytics at CA DWR – Romain Maendly & Andrew Schwartz (DWR)
4. Modeling and the Continuum Between Research and Application – Rusty Holleman (UC Davis, RMA)
5. Building Modeling Capacity for a Regulatory Program – Matt Holland (SWRCB)

10:30 a.m. – 12:15 p.m.

Session 4. Central Valley Project Water Temperature Modeling Platform

Moderator: Yung-Hsin Sun (Sunzi Consulting)

Location: Pavilion

1. When We Saw You Last: Recap 2022 Session on the Central Valley Project Water Temperature Modeling Platform – Randi Field (USBR)
2. If You Could See Me Now: Implementation of the Central Valley Project Water Temperature Modeling Platform – Tom Evans (RMA)
3. The Games We Play: Highlights of Model Calibration and Validation – Mike Deas (Watercourse Engineering) & Craig Addley (Stantec)
4. We Are What We Eat: Taming Data Management – Mike Deas (Watercourse Engineering) & Jeff Schuyler (Eyasco)
5. Put Things into Perspective: Characterize and Communicate Uncertainty – Mike Deas (Watercourse Engineering) & Yung-Hsin Sun (Sunzi Consulting)
6. Light at the End of the Tunnel: The Endgame – Randi Field (USBR)

Session 5. Airborne Electromagnetic (AEM) Data Applications in Groundwater Models

Moderator: Mesut Cayar (Woodard & Curran)

Location: Sierra 1

1. Introduction to DWR's Statewide Airborne Electromagnetic (AEM) Surveys – Katherine Dlubac & Benjamin Brezing (DWR)
2. Airborne Electromagnetic (AEM) Data to Groundwater Modeling – Saquib Najmus (Woodard & Curran)
3. From Airborne Electromagnetic (AEM) Data to Hydrogeologic Conceptual Models (HCMs) – Jack Baer & Sercan Ceyhan (Woodard & Curran)
4. Aquifer Parameterization with Texture2Par Incorporating Airborne Electromagnetic (AEM) Survey Data and Hydrogeological Conceptual Modeling (HCM) – Matt Tonkin (SSP&A)
5. Airborne Electromagnetic (AEM) Data Applications for Improving Stratigraphy of a Flood-MAR Model – Emily Honn (Woodard & Curran)

Session 6. Data, Tools, and Innovations in the California Water Plan Update 2023

Moderator: Abdul Khan (DWR)

Location: Folsom/Natoma

1. Draft Assumptions and Estimate for California Water Plan Update 2023 – Abdul Khan (DWR)
2. What Does the Water Balance Data Reveal About Changes in California Water Resources? – Jennifer Stricklin (DWR) & John Helly (UC San Diego)
3. Future Scenarios Project Update: Vulnerability Study of the Central Valley under Likely 2070 Conditions – Paul Shipman, Mohammad Rayej, Alejandro Perez & Wyatt Arnold (DWR)
4. Watershed Resilience Initiative – Eric Tsai (DWR)

12:15 – 1:00 p.m.

Lunch

Pick up a box lunch and then join us for the CWEMF Awards Ceremony in Pavilion.

Lunch sponsored by Pacific Agroecology

1:00 – 2:00 p.m.

Session 7. CWEMF Awards Ceremony

Moderator: Jesse Jankowski (CWEMF/SWRCB)

Location: Pavilion

Presentation of the Hugo B. Fischer and Distinguished Life Membership awards.

2:05 – 3:15 p.m.

Session 8. Pop-up Talks

Moderators: Stacy Tanaka (Watercourse Engineering) and Nigel Quinn (USBR/Berkeley National Lab)

Location: Pavilion

Five-minute overviews summarizing modeling work using a maximum of five PowerPoint slides per speaker.

3:30 – 5:15 p.m.

Session 9. Delta Ecosystem Modeling and Applications to Regional SAN Upgrade

Moderator: Joseph Zhang (Virginia Institute of Marine Science)

Location: Pavilion

1. Delta Stewardship Council-funded research and modeling – Dylan Stern (Delta Stewardship Council)
2. Modeling Delta water quality using coupled hydrodynamic and biogeochemical models – Zhenlin Zhang (DWR)
3. Estimating Biogeochemical Rates by a Novel Tracer Approach – Ed Gross (UC Davis)
4. Use of high-resolution field observation to calibrate an ecosystem model for Bay-Delta – Jiabi Du (Texas A&M at Galveston)
5. Impact of SRWTP upgrade on the Delta ecosystem – Jian Shen (Virginia Institute of Marine Science)

Session 10. Modeling Analysis Tools for Groundwater Recharge and Recovery Projects

Moderators: Hai Huang (Tetra Tech) & Brad Bessinger (S.S. Papadopulos & Associates)

Location: Sierra 1

1. Introduction to McMullin Aquaterra Water Bank Project and Modeling Needs – Mathew Hurley (McMullin Area Groundwater Sustainability Agency)
2. Predictions of Potential Groundwater Mounding and Depression Induced by Planned Aquaterra Water Bank Operations Under Climate Uncertainty and Path toward the Development of Full-scale Operation Model – Philip Bachand (Bachand and Associates)
3. Modeling Aquifer Storage and Recovery: Tailoring Complexity to the Needs of Operators and Regulators – Neil Deeds (INTERA)
4. Geochemical Modeling for Evaluating Compatibility in Managed Aquifer Recharge Projects – Brad Bessinger (S.S. Papadopulos & Associates)

Session 11. Deep Dive on Shasta Operations

Moderators: Derya Sumer (USBR)

Location: Folsom/Natoma

1. Finalizing Exploratory Analysis –Amanda Becker (USBR)
2. Assessing Operational Costs on Shasta using CalSim Flow Tracker – Cameron Koizumi (USBR)
3. Shasta Operations: Tradeoffs using Position Analysis – Derya Sumer (USBR)
4. Shasta Operations: Carryover, Fill, and TDM – Nancy Parker (USBR)

5:30 – 8:00 p.m.

Session 12. Business Meeting and Social

Moderator: Tariq Kadir (CWEMF/DWR)

Location: Cliff House of Folsom

Social sponsored by Jacobs, MBK Engineers, Resource Management Associates, and Tetra Tech

PLEASE RETURN YOUR NAME BADGE TO THE REGISTRATION TABLE IF YOU WILL NOT BE COMING BACK TO THE ANNUAL MEETING.

AGENDA

Tuesday, April 18

7:30 – 8:00 a.m. – Registration in Sierra Hallway

8:00 – 9:45 a.m.

Session 13. Flood Modeling: Extreme Flood Events under Climate Change in California

Moderator: Samson Haile-Selassie (DWR)

Location: Pavilion

1. Expectations of Changes in Atmospheric River Characteristics and Extreme Precipitation with Climate Change – Mike Anderson (DWR)
2. New CMIP6 Downscaled Climate Projections of Extreme Precipitation for California – Julie Kalansky (Scripps Institute, UC San Diego)
3. Potential Flood Risk associated with Climate Change in Central Valley: Comparison of Arkstorm 2.0, GCM Projections – Romain Maendly (DWR)
4. Incorporating Scenarios of Climate Change and Extremes into Emergency Response Exercises – Christine Albano (Desert Research Institute)

Session 14. Enhancements to the Integrated Water Flow Model (IWFM) and its Support Tools

Moderator: Can Dogrul (DWR)

Location: Sierra 1

1. New features in IWFM – Can Dogrul (DWR)
2. IWFM solute transport: Initial steps – Uditha Bandara (DWR)
3. ArcGIS Soil Data Builder: Migration to ArcGIS Pro – Thi Pham (DWR)
4. A New Vadose Zone Model for IWFM – Morteza Sadeghi (DWR)

Session 15. Delta Hydrodynamics and Ecology

Moderator: Xiaochun Wang (DWR)

Location: Folsom/Natoma

1. Hatching distribution, abundance, and losses to freshwater diversions of longfin smelt inferred using hydrodynamic and particle-tracking models – Edward Gross (RMA, UC Davis)
2. Sutter and Steamboat Sloughs Guidance Structures Evaluation Using ECO-PTM – Xiaochun Wang (DWR)
3. Compiling a Modeling Database for Restoration Sites in the Delta – Lily Tomkovic (DWR)
4. Restoration Effects on Reversing Flow in the North Delta – Ines Ferreira (DWR)
5. Exploring primary production and nutrient cycling in the Delta using a coupled hydrodynamic-biogeochemical model – Sienna White (SFEI, UC Berkeley)

10:00 – 11:45 a.m.

Session 16. CalSim 3 Development

Moderator: Nancy Parker (USBR)

Location: Pavilion

1. CalSim 3 Simulation Period Extension – Bridget Childs (Stantec), Kunxuan Wang (USBR), Mechele Pacheco (USBR), and Jim Polsinelli (DWR)
2. CalSim Hydro Input – Lauren Thatch (USBR)
3. CalSim 3: Tulare Development – Lauren Thatch (USBR)
4. Channel Routing and Multi-Timestep Optimization in WRIMS2 for the Sacramento Valley: A Water Year 1997 Case Study – Nicole Osorio (DWR, UC Davis)

Session 17. Modeling Nonpoint Source Pollution in California Aquifers Across Scales

Moderator: Thomas Harter (UC Davis)

Location: Sierra 1

1. Numerical Modeling to Assess Benefits of Efficient Nitrate Management and AgMAR Projects on Shallow Groundwater Quality at the Orchard Scale – Hanni Haynes (UC Davis, Montgomery & Associates) and Spencer Jordan (UC Davis)
2. Adaptation of the Soil and Water Assessment Tool (SWAT) To California’s Central Valley By Long Term Irrigated Lands Regulatory Program Water Quality Coalitions – Ken Miller & John Dickey – (Formation Environmental)
3. Multi-scale modeling of water and nitrate leaching to groundwater from irrigated agriculture using SWAT and Hydrus – Isaya Kisekka (UC Davis)
4. Quantifying Long-Term Regional Groundwater Quality Benefits from Good Agricultural Practices – Thomas Harter (UC Davis)
5. Simulating Potential Groundwater Quality Impacts from AgMAR – Helen Dahlke (UC Davis)

Session 18. Open Data – Putting Water Data to Work

Moderator: Christina McCready (DWR)

Location: Folsom/Natoma

1. State of California’s Data Policies and Initiatives – Joy Bonaguro (Office of Data and Innovation)
2. Partner Agency Team AB 1755 Implementation Accomplishments and Activities – Mahesh Gautam & Mitch Russo (DWR)
3. California Water Data Consortium - Composition, Role and Initiatives – Tara Moran (California Water Data Consortium)
4. Open Water Data Initiatives throughout the United States – Peter Colohan (Internet of Water & Coalition)

11:45 a.m. – 12:30 p.m. – Lunch

Pick up a box lunch and then join us for the keynote address in Pavilion.

Lunch sponsored by CBEC Eco Engineering

12:30 – 1:10 p.m.

Session 19. Keynote Address: Dr. Greg Gartrell (PPIC)

Moderator: Tariq Kadir (CWEMF/DWR)

Location: Pavilion

1:15 – 3:00 p.m.

Session 20. Salinity and Drought Modeling in the Bay-Delta

Moderator: Eli Ateljevich (DWR)

Location: Pavilion

1. West False River Barrier and Drought Control: Insights over New Conditions – Jon Burau (USGS) & Eli Ateljevich (DWR)
2. The Salinity Impact and Water Cost of Sea Level Rise: Initial Estimates and Uncertainties – Eli Ateljevich (DWR)
3. Browser-Based Dashboard for Salinity Emulation in the Delta – Raymond Hoang (DWR)
4. Delta Salinity Modeling using Physics-Informed Neural Network – Dong Min Roh (UC Davis)

Session 21. Coordinated Efforts to Model and Characterize Inter-basin Groundwater Flow

Moderator: Reza Namvar (Woodard & Curran)

Location: Sierra 1

1. Overview of 2017 assessment of interconnected subbasins project and its recommendations – Reza Namvar (Woodard & Curran)
2. Data collection and estimates of interbasin groundwater flow since 2017 and how GSAs are approaching interbasin coordination – Christina Buck (Butte County)
3. Application of IWFM's MultiModel Package in the Sacramento Valley to Leverage Local Scale Models and Reduce Uncertainty Related to Boundary Conditions – Jack Baer (Woodard & Curran)
4. Collaboration with neighboring basins to estimate inter-basin groundwater flow for GSPs: Three case studies for basins in southern and western California – Maureen Reilly (Todd Groundwater)

Session 22. Ecosystem Grab Bag

Moderator: Katherine Heidel (Tetra Tech)

Location: Folsom/Natoma

1. EcoFIP: A Toolkit for Rapid Identification, Design and Evaluation of Floodplain Rehabilitation Opportunities – Noelle Patterson (CBEC)
2. Landscape Scale Modeling of the Butte and Colusa Flood Basins to support Ecological Restoration – Kiernan Kelty & Megan Casey (CBEC)
3. Gravel Augmentation Study in the Stanislaus River Downstream of Goodwin Dam – Victor Huang (USBR)
4. Interpreting and near-term prediction of 3-D fish movement, guidance, and entrainment for water management operations in different reservoir and tidal river environments – Andy Goodwin (USACE)

3:15 – 5:00 p.m.

Session 23. Integrating Biological Effects into Environmental Modeling

Moderators: Josh Israel (USBR)

Location: Pavilion

1. Breaking Up the Iceberg: Characterizing Biological Effects from Environmental Models – Josh Israel (USBR), Victor Huang (USBR), Steve Micko (Jacobs), & Alex Jensen (USBR)
2. PTM: Entrainment Effects from Operations – Victor Huang (USBR) & Steve Micko (Jacobs)
3. Zone of Influence: Flow Effects from Operations – Steve Micko (Jacobs)
4. TDM: Temperature Effects for Shasta TCD Operations – Alex Jensen (USBR)

Session 24. Integrated Groundwater Models: Improving Land Surface Processes

Moderator: Dominick Amador (Woodard & Curran)

Location: Sierra 1

1. OpenET: Remote Sensing of Evapotranspiration – Robyn Grimm (Environmental Defense Fund)
2. Training Remotely Sensed Models Through Ground Truthing and Data Validation – Joel Kimmelshue (LandIQ)
3. Flood Water Allocation and Agricultural Site Suitability for Potential Flood Managed Aquifer Recharge – Francisco Flores-López (DWR)
4. Pulling It Together, High Resolution Demand Modeling – Dominick Amador (Woodard & Curran)

Session 25. Water Supply / Operations/ Hydrology Grab Bag

Moderator: Yuchuan Lai (Tetra Tech)

Location: Folsom/Natoma

1. Procedures and Results of Extending Unimpaired and Natural Flows for the Central Valley of California for Water Years 2021-2022 – Shalamu Abudu (DWR)
2. Digitizing and Assessing Unimpaired Runoff Time Series in Bulletin 5 during Water Years 1872 to 1921 – Yuchuan Lai (Tetra Tech)
3. Forecast Informed Reservoir Operations (FIRO) in the Folsom and Klamath Basins – Drew Loney (USBR)
4. First Order Delta Salinity Estimation – Drew Loney (USBR)

5:00 – 7:00 p.m.

Session 26. Poster Session & Social

Location: Sierra 1

Posters will be set up by 10:00 a.m. and available for viewing all day. Presenters will be available from 5:00 p.m. to 7:00 p.m.

Social sponsored by ICF, SS. Papadopoulos & Associates, Watercourse Engineering, and Woodard & Curran

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AGENDA

Wednesday, April 19

7:30 – 8:00 a.m. – Registration in Sierra Hallway

8:00 – 9:45 a.m.

Session 27. Challenges in Recent CalSim 3 Hydrology Development, Part 1

Moderator: Hongbing Yin (DWR)

Location: Pavilion

1. Wind Stilling Impact on Recent Potential Evapotranspiration Trend – Jianzhong Wang (DWR)
2. Challenges in CalSim 3 Historical Rim Inflow Adjustment for Current Climate Condition – Z. Richard Chen (DWR)
3. Rim Watershed Rainfall-Runoff Model Development and Selection – Jianzhong Wang (DWR)
4. Which 30-year Historical Period is Most Critical to SWP/CVP Planning – Hongbing Yin (DWR)

Session 28. Capturing Nuances of Surface Water/Groundwater Interactions to Quantify Stream Depletion

Moderator: Gilbert Barth (S.S. Papadopulos & Associates)

Location: Sierra 1

1. The Importance of Capture in the Sustainable Management of Groundwater Storage vs. Surface Water Storage – Steffen Mehl (CSU Chico)
2. Map-Based Open-Source Stream Depletion Tools – Jessica Rogers & Gilbert Barth (SSP&A)
3. Estimating Timing and Location of Stream Depletion in the Central Valley: Comparison of C2VSimFG, SVSim, and SacFEM – Tyler Hatch (DWR)
4. Asymmetric quantification of stream-groundwater interaction based on Stream Aquifer Flow Exchange (SAFE) method – Giorgos Kourakos (UC Davis)

Session 29. Temperature Modeling Nexus Grab Bag

Moderator: Benjamin Bray (EBMUD)

Location: Folsom/Natoma

1. Quantifying Uncertainties in Forecasts of Managed Temperature and Temperature Dependent Mortality in the Shasta-Sacramento River System – James Gilbert (UCSC/NOAA)
2. Temperature-dependent egg mortality (TDM) for winter-run on the Sacramento River, a hindcast analysis for 2022 – Miles Daniels (UCSC/NOAA)
3. Factors Controlling Diurnal Temperature Stratification in Riverine Pools – Ben Abban (USBR)
4. Modeling and Assessment of Humboldt County Contract Water on the Trinity River – Adam Witt (Stantec)

10:00 – 11:45 a.m.

Session 30. Data, Data Everywhere: How to Use it Best

Moderator: Frank Qian (Woodard & Curran)

Location: Pavilion

1. Beyond the Numbers: The Future of Sustainable Groundwater Management Through Data-Driven Implementation California's Groundwater Data World –Saquib Najmus (Woodard & Curran)
2. DWR Data and Tools– Ben Brezing (DWR)
3. Completing the Water Budget – A mapping of California Water Balance data to a Complete Water Budget – Paul Shipman (DWR)

Session 31. Groundwater Sustainability Beyond California

Moderator: Steffen Mehl (CSU Chico)

Location: Sierra 1

1. Groundwater Management in Arizona – Vivek Bedekar (SSP&A)
2. Groundwater Models in Arizona: A Look at Development and Application – Justin Clark (Lynker)
3. New Mexico Groundwater Management, Perspective on Methods and Challenges – Gilbert Barth (SSP&A)
4. Application of Groundwater Models for Groundwater Management at the South Florida Water Management District – Uditha Bandara (DWR)

Session 32. Surface Transport Modeling Issues Related to EC, Practical Salinity and Major Ions

Moderator: Sujoy Roy (Tetra Tech)

Location: Folsom/Natoma

1. Application of the Practical Salinity Scale to the Waters of San Francisco Estuary – Sujoy Roy (Tetra Tech)
2. Conservative Mixing and Implications for Simulating EC in San Francisco Estuary: Part 1 – Paul Hutton (Tetra Tech)
3. Conservative Mixing and Implications for Simulating EC in San Francisco Estuary: Part 2 – Paul Hutton (Tetra Tech)
4. Salinity-Constituent Conversion using Machine Learning – Peyman Namadi (DWR)

11:45 a.m. – 1:15 p.m. - Lunch

Lunch at area restaurants

1:15 – 3:00 p.m.

Session 33. Modeling for HABs Decision Support

Moderator: John Bratton (LimnoTech)

Location: Pavilion

Following the presentations, the moderator will lead an extended discussion to identify needs, gaps, and opportunities for improvement of modeling for HABs decision support.

1. The Emergency Drought Barrier and Harmful Algal Blooms in the Central Sacramento-San Joaquin Delta – Keith Bouma-Gregson, Tamara Kraus, & Brian Bergamaschi (USGS)
2. Tracer-based Phytoplankton Modeling in the Northern San Francisco Estuary – TBD
3. Modeling HABs with CE-QUAL-W2: Approaches and Future Challenges – Mike Deas (Watercourse Engineering)

Session 34. Groundwater Grab Bag

Moderator: Jon Traum (USGS)

Location: Sierra 1

1. Sacramento Valley Groundwater-Surface Water Simulation Model (SVSim): A New Tool for Evaluating Stream Depletion in the Sacramento Valley – Chris Bonds (DWR)
2. Application of Meta-Heuristic Algorithm to Optimize Recycled Water Injection – Sorab Panday & Hiroko Hort (GSI Environmental)
3. Delineating Buffer Zones for Brackish Water Resource Protection in Texas – Vivek Bedekar (SSP&A)
4. Hydroeconomic Modeling of SGMA Demand Management – Brooks Ronspies & Richard Howitt (ERA Economics)
5. How SGMA Can Help Resolve the Disconnect in California’s Treatment of Surface Water and Groundwater Interconnectivity – Jim McCord & Wesley Miliband (Lynker)

Session 35. Climate Change Modeling

Moderator: Kunxuan Wang (USBR)

Location: Folsom/Natoma

1. GCM selection – Drew Loney & Kevin Thielen (USBR)
2. Climate Change Data Development Current and Future Efforts – Tapash Das & Syed Azhar (Jacobs)
3. New System Risk Informed Climate Scenarios for CalSim3 – Andrew Schwarz (DWR)

3:15 – 5:00 p.m.

Session 36. Challenges in Recent CalSim 3 Hydrology Development, Part 2

Moderator: Richard Chen (DWR)

Location: Pavilion

1. New Hydrologic Forecasts for CalSim 3 – Hongbing Yin (DWR)
2. Precipitation Sensitivity over the Central Valley Floor Hydrology in CalSim 3 – Z. Richard Chen (DWR)
3. Lessons Learned in Calculating Evapotranspiration in CalSim 3 – James Polsinelli (DWR)
4. Temperature Sensitivity of Field Evapotranspiration and Reservoir Evaporation in CalSim 3 – Mohammad Hasan (DWR)

Session 37. Land Subsidence in California

Moderator: Vivek Bedekar (S.S. Papadopulos & Associates)

Location: Sierra 1

1. A Land Subsidence Dataset for Groundwater Model Calibration in the Central Valley – Tyler Hatch (DWR)
2. Delayed Subsidence Formulation and Application using IWFM – Vivek Bedekar (SSP&A)
3. Simulation of Subsidence in the Central Valley – Jonathan Traum (USGS)
4. Extrapolating Subsidence Temporally and Spatially from 1-D Models – Pete Dennehy (Montgomery and Associates)

Session 38. Temperature Modeling

Moderator: Drew Loney (USBR)

Location: Folsom/Natoma

1. Temperature Modeling Improvements – Drew Loney (USBR)
2. Tier Optimization – Drew Loney (USBR)
3. Keswick Warming Analysis – Drew Loney (USBR)

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