

2024 CWEMF Annual Meeting 30th Anniversary Plenary Session

30 YEARS

CWEMF at 30: Looking to the Past,
Recalibrating for the Future

A wooden signpost with two arrows pointing left and right, labeled 'PAST' and 'FUTURE' respectively, against a blue sky background. The signpost is made of light-colored wood and is mounted on a vertical wooden post. The arrows are also made of wood and have a pointed end. The background is a bright blue sky with some light clouds. The overall image has a clean, modern aesthetic with a white and blue decorative border at the top.

PAST

FUTURE

CWEMF Mission

CWEMF is a non-profit, non-partisan organization whose mission is to increase the usefulness of models and technical analysis tools for evaluating California's water-related problems and to provide a collaborative forum for advancing knowledge on water issues.

Officers
Convener
Vice-Convener
Secretary
Treasurer
Past Convener

Steering
Committee

Bylaws

Executive Director
Webmaster

Membership
Organization Members
Individual Members

2024 CWEMF Organization Members

LARGE

- Cal Department of Water Resources
- Cal State Water Resources Control Board
- U.S. Bureau of Reclamation

MEDIUM

- Contra Costa Water District
- Delta Stewardship Council
- East Bay Municipal Utilities District
- Metropolitan Water District of Southern California
- U.S. Geological Survey

PRIVATE (SMALL)

- Geosyntec
- ICF
- INTERA
- Jacobs
- Resource Management Associates
- S.S. Papadopoulos & Associates
- Stantec
- West Yost Associates
- Woodard & Curran

The History of the
California Water and Environmental Modeling Forum



CWEMF Ad hoc History Committee

August 28, 2024

A Brief History



1978
D-1485

1986
Racanelli
Decision

1992
Draft
D-1630

1982
Peripheral
Canal
Rejected

1987
SWRCB
Hearings

1994
Bay-Delta Accord
CALFED Formation
Bay-Delta Modeling
Forum (BDMF)
Established
1st BDMF Workshop

1995

1st BDMF
Annual
Meeting in
Asilomar

2000

Modeling
Protocols
Document

2004

Name
Change to
CWEMF

1996

Peer Review
Guidance
Document

2001

1st Peer
Review

2005

Strategic
Analysis
Framework
Document

2012

Annual Meeting
Location Moved
to Folsom

2015

CWEMF
Strategic
Plan
Adopted

2021

Modeling
Protocols
Document
Update

2014

Sustainable
Groundwater
Management
Act

2020-21

On-Line
Annual
Meetings
(COVID
Pandemic)

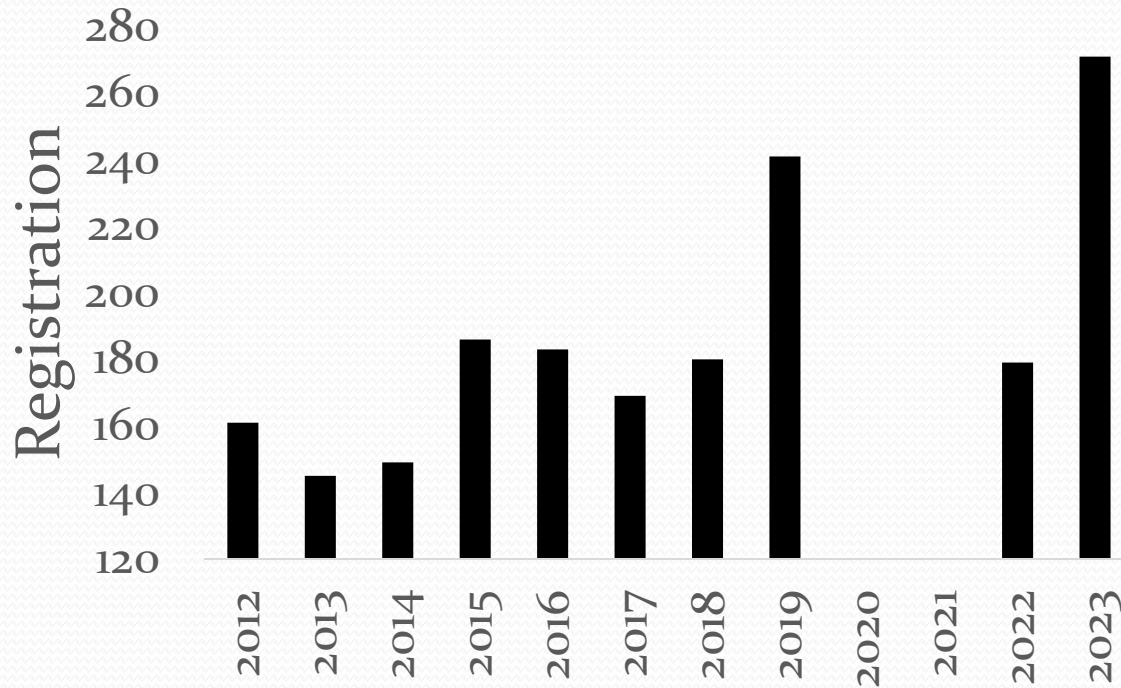
2024
Strategic
Plan
Review
Initiated

Notable Accomplishments

- Technical conferences (Annual Meeting) held every year since 1995
- Workshops (over 100 since 1995)
- Reports
 - Protocols for Water & Environmental Modeling (2000, 2021)
 - A Strategic Analysis Framework for Managing Water in California (2005)
- Peer Reviews (6)

see www.cwemf.org for details

Annual Meeting Registration 2012-2023



Thank You to Our Officers

Present & Past



CWEMF Executive Director & Officers

Executive Director:	Paul Hutton (Tetra Tech, Inc.)
Convener:	Jesse Jankowski (SWRCB)
Vice-Convener:	Vivek Bedekar (S.S. Papadopulos & Assoc.)
Secretary:	Ben Bray (East Bay Municipal Utility District)
Treasurer:	Stacy Tanaka (Watercourse Engineering, Inc.)
Past-Convener:	Tariq Kadir (CA Dept of Water Resources)

Past CWEMF Conveners

2021-2022	Tariq Kadir (CA Dept of Water Resources)	2002-2004	Nigel Quinn (Lawrence Berkeley NL, U.S. Bureau of Reclamation)
2019-2020	Shyamal Chowdhury (United States Army Corps of Engineers)	2001	Richard Satkowski (State Water Resources Control Board)
2017-2018	Tariq Kadir (CA Dept of Water Resources)	2000	Rob Tull (CH2M Hill)
2015-2016	Josué Medellín-Azuara (UC Davis)	1999	Spreck Rosekrans (Environmental Defense)
2013-2014	Ben Bray (East Bay Municipal Utility District)	1998	Richard Denton (Contra Costa Water District)
2011-2012	Marianne Guerin (Resource Management Associates)	1996-1997	Jay Lund (U.C. Davis)
2009-2010	Paul Hutton (Metropolitan Water District of Southern California)	1995	Jeff Lefkoff (Hydrologic Consultants, Inc.)
2007-2008	Tara Smith (CA Dept of Water Resources)	1994	Greg Gartrell (Contra Costa Water District)
2005-2006	K. T. Shum (East Bay Municipal Utility District)		

Past CWEMF Vice Conveners

2021-2022	Jesse Jankowski (SWRCB)
2020	Tariq Kadir (CA Dept of Water Resources)
2019	Abdul Khan (CA Dept of Water Resources)
2017-2018	Shyamal Chowdhury (United States Army Corps of Engineers)
2015-2016	Tariq Kadir (CA Dept of Water Resources)
2013-2014	Josué Medellín-Azuara (UC Davis)
2011-2012	Ben Bray (East Bay Municipal Utility District)
2009-2010	Marianne Guerin (Resources Management Associates)
2007-2008	Paul Hutton (Metropolitan Water District of Southern California)

2005-2006	Tara Smith (CA Dept of Water Resources)
2003-2004	K.T. Shum (East Bay Municipal Utility District)
2002	Rob Tull (CH2M Hill)
2000-2001	Lloyd Peterson (U.S. Bureau of Reclamation)
1999	George Barnes (CA Department of Water Resources)
1998	Spreck Rosekrans (Environmental Defense)
1996-1997	Richard Denton (Contra Costa Water District)
1995	Jay Lund (U.C. Davis)
1994	Jeff Lefkoff (Hydrologic Consultants, Inc.)

Past CWEMF Secretaries

2021- Present	Ben Bray (EBMUD)
2013-2020	George Nichol (Retired)
2001-2012	George Nichol (State Water Resources Control Board)
2000	George Nichol (Central Valley Reg. Water Quality Control Bd)
1994-1999	George Nichol (U.S. Army Corps of Engineers)

Past CWEMF Treasurers

2008-present	Stacy Tanaka (Watercourse Engineering, Inc.)
2002-2007	Lisa Holm (Contra Costa Water District, CALFED)
2001	Kevin Long (State Water Resources Control Board)
1994-2000	Margaret Johnston (San Francisco Estuary Institute)

Thank You
to Our Steering
Committee



CWEMF Steering Committee 2024

- Will Anderson (SWRCB)
- Vivek Bedekar (SSP&A)
- Ben Bray (EBMUD)
- Yiwei Cheng (DWR)
- Shyamal Chowdhury (USACE)
- Mike Deas (Watercourse)
- John DeGeorge (RMA)
- Ben Geske (Delta Stewardship)
- Regina Graziano (SWRCB)
- Samson Haile-Selassie (DWR)
- Katherine Heidel (Tetra Tech)
- Anne Huber (ICF)
- Jesse Jankowski (SWRCB)
- Norman Johns (DWR)
- Tariq Kadir (DWR)
- Abdul Khan (DWR)
- Puneet Khatavkar (Stantec)
- Jesse Jankowski (SWRCB)
- Norman Johns (DWR)
- Tariq Kadir (DWR)
- Abdul Khan (DWR)
- Puneet Khatavkar (Stantec)
- Josue Medellin (UC Merced)
- Kijin Nam (DWR)
- George Nichol (Public Member)
- Nicole Osorio (DWR)
- Pavithra Prakash (DWR)
- Nigel Quinn (LBL)
- Eric Reyes (DWR)
- Nicky Sandhu (DWR)
- Rich Satkowski (Public Member)
- Yung-Hsin Sun (Sunzi)
- Stacy Tanaka (Watercourse)
- Jon Traum (USGS)
- Rob Tull (Jacobs)
- Zhong Zhang (HEC/Portland State U.)

Thank You
to Our Past
Executive Directors

Past CWEMF Executive Directors

2010-2017	Elaine Archibald (Archibald Consulting)
2003-2010	Richard Satkowski (SWRCB)
1997-2002	John Williams (Retired)

Congratulations to Our Previous Award Winners

Hugo B. Fischer Award

- 2023 – Dr. Michael MacWilliams (Anchor)
- 2019 – Charles Young (SEI)
- 2018 – Dr. Saquib Najmus (Woodard & Curran)
- 2018 – Dr. Ali Taghavi (Woodard & Curran)
- 2017 – Rich Juricich (DWR)
- 2016 – Dr. Eli Ateljevich (DWR)
- 2015 – Dr. Mike Deas (Watercourse)
- 2014 – Dan Easton (MBK)
- 2013 – Dr. Nigel Quinn (LBL/USBR)
- 2012 – Nancy Parker (USBR)
- 2011 – Dr. Russ Brown (ICF)
- 2009 – Dr. Pete Smith (USGS)
- 2008 – Dr. Richard Howitt (UC Davis)
- 2008 – Dr. Jay Lund (UC Davis)
- 2007 – Dr. John DeGeorge (RMA)
- 2006 – Dr. Paul Hutton (MWDSC)
- 2006 – Dr. Carl Chen (Systech)
- 2004 – Tom Heinzer (USBR)
- 2003 – Dr. Emin C. Dogrul (DWR)
- 2002 – Dr. Gerald Orlob (UC Davis)
- 2001 – Armin Munevar (DWR)
- 2000 – Kamyar Guivetchi (DWR)
- 2000 – Dwight Russell (DWR)
- 1999 – Walter Bourez (SWRI)
- 1999 – Jack Rowell (USBR)
- 1997 – Dr. Francis Chung (DWR)
- 1997 – Dr. Gregory Gartrell (CCWD)
- 1996 – Dr. Ralph Cheng (USGS)
- 1995 – Dr. Richard Denton (CCWD)
- 1995 – Dr. Alan Jassby (UC Davis)

1st Fischer Award Winners (1995)



Career Achievement Award

- 2022 – Dr. Parviz Nader-Tehrani (DWR)
- 2019 – Dr. Jobaid Kabir (USBR)
- 2018 – Dr. Francis Chung (DWR)
- 2017 – Dr. Bill Fleenor (UC Davis)
- 2015 – Don Smith (RMA)
- 2013 – Dr. Sushil Arora (DWR)
- 2011 – Dr. Miguel Marino (UC Davis)
- 2010 – Dr. Richard Denton (CCWD)
- 2009 – Ray Hoagland (DWR)
- 2008 – Lloyd Peterson (USBR)
- 2007 – Darryl Davis (HEC)
- 2006 – George Barnes (DWR)
- 2005 – Maury Roos (DWR)
- 2004 – Lyle Hoag (Brown & Caldwell)

1st Career
Achievement Award
Winner
(2004)



Distinguished Life Member Award

- 2023 – Dr. Ben Bray (EBMUD)
- 2022 – Dr. Paul Hutton (Tetra Tech)
- 2019 – Dr. Stacy Tanaka (Watercourse)
- 2018 – Dr. Hubert Morel-Seytoux (Hydroprose)
- 2017 – Tara Smith (DWR)
- 2016 – Dr. Marianne Guerin (RMA)
- 2015 – Dr. Tariq Kadir (DWR)
- 2014 – Dr. Nigel Quinn (LBL/USBR)
- 2012 – Rich Satkowski (SWRCB)
- 2011 – George Nichol (SWRCB)
- 2010 – Dr. K.T. Shum (EBMUD)

1st DLM Award Winner (2010)



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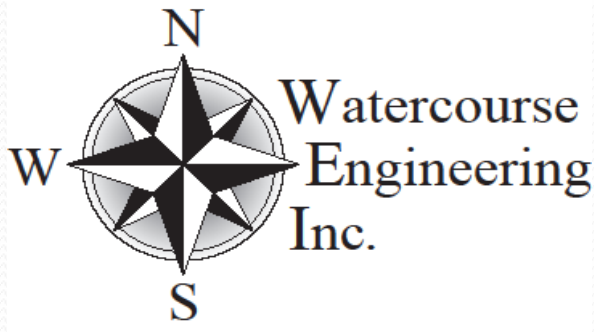
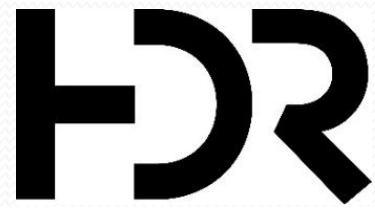
 **RMA** RESOURCE
MANAGEMENT
ASSOCIATES
WATER RESOURCES ENGINEERING
A GEI Consultants, Inc. Company

 **TETRA TECH**

 **S.S. Papadopoulos & Associates, Inc.**
Environmental and Water-Resource Consultants


CWEMF
CALIFORNIA
Water & Environmental
Modeling Forum

Tuesday Evening Social Sponsors



Other Sponsors

Lunches



Refreshments





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Water Resources Planning Toolkits for Climate Resiliency and Economic Sustainability

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A special issue of *Water* (ISSN 2073-4441). This special issue belongs to the section "**Water and Climate Change**".

Deadline for manuscript submissions: **25 July 2025** | Viewed by 7108



This Special Issue on “**Water resources planning toolkits for climate resiliency and economic sustainability**” seeks contributions that describe innovative approaches that can be applied by stakeholders, government entities and regulators to plan environmentally sound, sustainable, and cost-effective water resource and water management strategies to cope with present and future anticipated threats. Examples from agriculture, municipal and industrial sectors, and environmental stewards are encouraged. Papers that develop cross-cutting and integrated approaches are particularly encouraged.

Some examples of topics that submitted papers may address include:

- Novel or successful sensing techniques for measuring and monitoring water resource availability, quantity, and quality as a basis for progressing towards future sustainable management.
- Novel computer-based-simulation modeling and other analytical techniques that enhance understanding of environmental and/or economic threats as an aid to the formulation of coping and solution strategies.
- Advanced sensor and remote-sensing technologies that can be integrated with more traditional modeling approaches for sustainable water and water quality resource management.
- Innovative economic and non-economic accounting practices that can be integrated with more traditional decision-support tools to meet 21st century water, water quality, and other resource management challenges.
- Integration of new methods and approaches to address broader ecosystem services and tackle unintended consequences of water and water-quality resource management decisions and regulations.


https://www.mdpi.com/journal/water/special_issues/7DN3XCZ1I5

Papers may be submitted from now until July 25, 2025 - papers are published on an ongoing basis. Submitted papers should not be under consideration for publication elsewhere. We also encourage authors to send a short abstract or tentative title to the Editorial Office in advance (djurdjevic@mdpi.com).

Water is one of MDPI's open access journals. It is indexed in *SCIE* and has the Impact Factor 3.530 An article processing charge (APC) of 2200 CHF (Swiss Francs) applies to papers accepted after peer review.

Manuscripts published to date include the following (all CWEMF members)

Research


[Open Access](#) [Article](#) 29 pages, 4131 KIB 

Headwater Valuation as a Tool for Economic Development, Healthy Forest Management, and Water Resilience

by David Batker, Jared Soares, Yung-Hsin Sun, Aaron Batker-Pritzker and Rebecca Guo
Water 2024, 16(15), 2121; <https://doi.org/10.3390/w16152121> - 26 Jul 2024
Viewed by 758

Abstract The upper American River watershed (UARW) provides a myriad of valuable benefits for local communities as well as throughout the state, nation, and even globally. These environmental benefits, often called ecosystem goods and services (EGS), include food, water, power, and recreational opportunities, among [...] [Read more](#).
(This article belongs to the Special Issue Water Resources Planning Toolkits for Climate Resiliency and Economic Sustainability)

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[Open Access](#) [Article](#) 20 pages, 8226 KIB 

Combining Crop and Water Decisions to Manage Groundwater Overdraft over Decadal and Longer Timescales

by Yiqing Yao, Jay R. Lund and Josué Medellín-Azuara
Water 2024, 16(9), 1223; <https://doi.org/10.3390/w16091223> - 25 Apr 2024
Viewed by 946

Abstract Coordinating management of groundwater, surface water, and irrigated crops is fundamental economically for many arid and semi-arid regions. This paper examines conjunctive water management for agriculture using hydro-economic optimization modeling. The analysis is integrated across two timescales: a two-stage stochastic decadal model for [...] [Read more](#).
(This article belongs to the Special Issue Water Resources Planning Toolkits for Climate Resiliency and Economic Sustainability)

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[Open Access](#) [Article](#) 40 pages, 9564 KIB  

Groundwater Sustainability and Land Subsidence in California's Central Valley

by Claudia C. Faunt, Jonathan A. Traum, Scott E. Boyce, Whitney A. Seymour, Elizabeth R. Jachens, Justin T. Brandt, Michelle Sneed, Sandra Bond and Marina F. Marcelli
Water 2024, 16(8), 1189; <https://doi.org/10.3390/w16081189> - 22 Apr 2024
Viewed by 4090

Abstract The Central Valley of California is one of the most prolific agricultural regions in the world. Agriculture is reliant on the conjunctive use of surface-water and groundwater. The lack of available surface-water and land-use changes have led to pumping-induced groundwater-level and storage declines, [...] [Read more](#).
(This article belongs to the Special Issue Water Resources Planning Toolkits for Climate Resiliency and Economic Sustainability)

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