

Association of Ground Water Agencies - American Ground Water Trust

AGWA – AGWT Annual Conference

“Everything aquifers and groundwater management”

Wednesday, February 15 and Thursday, February 16, 2017

Radisson Hotel Ontario Airport, 2200 East Holt Boulevard, Ontario, California 91761

In cooperation with Groundwater Resources Association and the California Groundwater Coalition



Background

The first AGWA/AGWT joint conference was held in Ontario, CA in 2000. Since then, this annual event has provided an important information exchange and networking opportunity for California’s water agencies, utilities and water districts, and for all water professionals (scientific, engineering, managerial, legal, environmental, regulatory), end-users of water, and local and state elected officials involved with water policy issues. The focus of every program has been on current groundwater management issues in California.

Event Sponsors



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Approved/CA Drinking Water Operator Certification Program – Feb 15-5.75 Hrs/Feb 16-5.25 Hrs

Wednesday February 15th

8:15 – 9:15 REGISTRATION (Coffee, pastries and view exhibits)

9:15 – 9:30 **WELCOME, OPENING REMARKS FROM AGWA AND AGWT**
Anthony Zampielo, Chairman, Association of Ground Water Agencies
Andrew Stone, Executive Director, American Ground Water Trust

9:30 – 10:00 **Keynote Presentation (1)**

PERSPECTIVES ON CALIFORNIA WATER POLICY

Frances Spivy-Weber, Vice Chair, California State Water Resources Control Board, Sacramento, CA



Frances Spivy-Weber of Redondo Beach was first appointed to the State Water Resources Control Board in 2007, reappointed and elected Vice-Chair of the Board in 2009, and reappointed by Governor Brown in 2013 to a four-year term. Before being appointed to the Board, she served as the Executive Director of the Mono Lake Committee.

From 1983 to 1992, Ms. Weber served as the Director of international programs for the National Audubon Society. She previously was a legislative assistant for the Animal Welfare Institute from 1978 to 1982. Ms. Spivy-Weber is currently serving as Chair of the Water Policy Center Advisory Council with the Public Policy Institute of California; Member, Advisory Board of Synergy; and Member, Advisory Committee on Recycled Water and Direct Augmentation of Surface Waters and Feasibility of Direct Potable Reuse.

She has served on many boards, including the Water Education Foundation, California Council of Land Trusts, and Clean Water Action/Clean Water Fund.

10:00 – 10:30 **Keynote Presentation (2)**

**STORM WATER DISCHARGE REGULATIONS:
PROBLEM OR PROMISE FOR SOUTHERN CALIFORNIA GROUNDWATER RECHARGE?**

Tracy J. Egoscue, Attorney, Egoscue Law Group, Long Beach, CA



Ms. Egoscue's primary practice areas include Water Quality; Water Rights; Groundwater and Soil Remediation; Permits; Enforcement Matters; Wetland Development and Mitigation; and Environmental Litigation. Prior to forming the Egoscue Law Group Tracy's legal experience included Executive Officer of the State of California Regional Water Quality Control Board - Los Angeles Region and Deputy Attorney General for the California Department of Justice. As Executive Director of the Santa Monica Baykeeper she achieved a \$5 billion Clean Water Act settlement against the City of Los Angeles.

Ms. Egoscue received her J.D. from George Washington University in Washington, D.C. and her B.A. from the University of California at Santa Barbara.

10:30 – 10:50 BREAK

10:50 – 12:20 Session 1

GROUNDWATER RECHARGE AND THE STORMWATER - (MS4) PROGRAM

Moderator:

Anthony Zampielo, Chairman, Association of Ground Water Agencies

This session involves the requirements that the state has imposed on cities to meet the new MS4 requirements. Discussion will include how storm water is conserved, spread and recharged to augment groundwater supply, and will consider the impacts on water quality from recharge operations.

COMPLIANCE WITH MS4 REGULATIONS

Oliver Chi, City Manager, City of Monrovia, Monrovia, CA

STORMWATER: HOW IT IS MANAGED FOR CONSERVATION AND FLOOD PROTECTION

Keith Lilley, PE, Principal Engineer, Los Angeles Dept of Public Works, Water Resources Div, Los Angeles County

SITING AND DESIGN OF LARGE STORMWATER CAPTURE RECHARGE BASINS IN SOUTHERN CALIFORNIA

Trey Driscoll, PG, CHG, Principal Hydrogeologist, DUDEK Engineering, Encinitas, CA

12:20 – 1:30 LUNCH

1:30 – 3:00 Session 2

SOUTHERN CALIFORNIA WATER MANAGEMENT

Moderator:

Lynn Grijalva, PE, Vice President, Hazen and Sawyer, Los Angeles, CA

The management of Southern California's groundwater resources requires creative strategies to ensure that supplies can be sustainable. The Cadiz project to bring water from the Mohave Desert, and WRD's plan for effective use of groundwater recharge, storage and recovery are two current innovations. Overshadowing the issue of water availability for direct use or groundwater recharge is uncertainty about future Colorado River water deliveries.

GROUNDWATER BASINS MASTER PLAN (Utilizing groundwater storage and resources more effectively)

Ted Johnson, PG, CHG, Groundwater Manager, Water Replenishment District of Southern California, Lakewood, CA

UPDATE ON CADIZ WATER PROJECT

Scott Slater, Attorney, President and CEO, Cadiz, Inc., Los Angeles, CA

PLANNING FOR UNCERTAINTY: COLORADO RIVER WATER TRANSFERS TO SOUTHERN CALIFORNIA

Bill Hasencamp, PE, Manager, Colorado River Resources, Metropolitan Water District, Los Angeles, CA

3:00 – 3:20 BREAK

3:20 – 5:00 Session 3

AFTER SGMA: CHALLENGES OF SUSTAINABLY MANAGING GROUNDWATER

Moderator:

Stephen J. Cullen, PhD, PG, Principal Hydrogeologist/Sr. VP, Daniel B. Stephens & Associates, Inc., Santa Barbara, CA

The Sustainable Groundwater Management Act, enacted in January 2015, established compliance milestones for reaching sustainable groundwater management. This session presents experiences and lessons learned in the pursuit of achieving the sustainability goal. The speakers draw from case studies and data derived from specific adjudicated basins where the goal of groundwater sustainability is a critical component of a workable water rights settlement or judgement by examining sustainability indicators that are also identified in SGMA.

LESSONS LEARNED IN DEVELOPING DEFENSIBLE GROUNDWATER BUDGETS AND EVALUATING SUSTAINABILITY INDICATORS

Gregory Schnaar, PhD., Principal Environmental Scientist, Daniel B. Stephens & Associates, Inc., Silver Spring, MD

CHALLENGES AND EXPERIENCES IN SUSTAINABLE GROUNDWATER MANAGEMENT IN THE CHINO BASIN

Peter Kavounas, PE, General Manager, Chino Basin Watermaster, Rancho Cucamonga, CA

GROUNDWATER SUSTAINABILITY, SALINITY, AND NITRATE: THE CENTRAL VALLEY

Joe LeClaire, PhD, Associate, CDM Smith, Irvine, CA

SGMA-ALTERNATIVE ANALYSIS FOR THE CENTRAL BASIN

Brian Partington, PG, CHG, Hydrogeologist, Water Replenishment District of Southern California, Lakewood, CA

5:00 – 6:30 RECEPTION - CASH-BAR (Hors D'Oeuvres)



7:30 – 8:30 REGISTRATION (Coffee, pastries and view exhibits)

8:30 – 10:10 Session 4

EFFICIENT/COST EFFECTIVE WELLFIELD MANAGEMENT

Moderator:

Brian Villalobos, PG, CHG, CEG, Principal Geohydrologist, GEOSCIENCE, Claremont, CA

Using the already reduced water supplies in Southern California efficiently and cost effectively is the goal of all those responsible for supplying water to a growing population. This session will look at methods for efficiently managing groundwater basins, future planning to optimize all available water supplies, and the current thought on more efficiently managing wellfields and maximize well capacities.

EFFECTIVE WELLFIELD OPERATIONS USING KEY WELLS – THE CONCEPT

Johnson Yeh, Ph.D., PG, CHG, Principal, GEOSCIENCE, Claremont, CA

25 YEARS OF WELLFIELD MANAGEMENT USING KEY WELLS AND ANNUAL GROUNDWATER AUDIT

Warren Back, PE, Engineering Manager - Operations, and Rich Ottolini, Water Operations Manager, Rancho California Water District, Temecula, CA

THINKING INTO THE FUTURE FOR SUSTAINABLE GROUNDWATER BASIN MANAGEMENT

Joe Zoba, General Manager, Yucaipa Valley Water District, Yucaipa, CA

MODERN TECHNOLOGIES IN WELLFIELD MANAGEMENT: PRODUCING THE MOST WATER AT THE LEAST COST

Mark Williams, Ph.D., PE, Vice President, GEOSCIENCE, Claremont, CA

10:10 10:30 BREAK

10:30 – 12:00 Session 5

CHROME 6 – HOW TO TREAT IT – EMERGING TECHNOLOGIES.

Moderator:

Terry Foreman, PG, CHG, Groundwater Consultant, Camarillo CA

The session will showcase recent technology breakthroughs in the effectiveness and economics of water treatment systems to remove and reduce Chrome 6 and arsenic. With lower treatment costs it may be possible to bring into inventory groundwater sources previously abandoned as too expensive to treat.

TREATMENT TECHNOLOGIES, GRANT FUNDING AVAILABILITY AND OVERVIEW OF WATER DISTRICT TREATMENT IMPLEMENTATION

Jacqueline Rhoades, PE, Associate, Hazen and Sawyer, Palm Desert, CA

Scott Rogers, Utilities General Manager, Coachella Water Authority, Coachella, CA

REDUCING TREATMENT COSTS FOR CHROME 6 AND OTHER METALS IN GROUNDWATER

Bill Ketchum, President, ATEC Systems Associates, Seattle, WA

MAKING A STRONG CASE FOR A WEAK BASE (*Chrome 6 Treatment Results*)

Adam Shumway, Project Engineer, Layne Christensen, Mesa, AZ

12:00 – 12:15

Special Guest Presentation

THE MAN WHO THOUGHT HE OWNED WATER

Tershia d'Elgin, Author, San Diego

Tershia d'Elgin is an author and social activist, with a special interest in water policy, soil, and the tension between agriculture and metropolitan claims on water. A San-Diego based writer and water-resources consultant; she also oversees a working farm on the South Platte River in Colorado.

*Her book **The Man Who Thought He Owned Water**, about water through the lens of that Colorado farm, reveals tightening, well-financed claims on surface and ground water across the West.*



12:15 – 1:30 LUNCH

1:30 – 3:30 Session 6

CLIMATE CHANGE IMPACTS TO GROUNDWATER, ESPECIALLY AS THEY RELATE TO SGMA

Moderator:

Abhishek Singh, Ph.D., Manager, California Operations, Senior Water Resources Engineer, INTERA Inc., Torrance, CA

Climate change models indicate that hydrologic flow regimes in California are likely to change and drive changes in agricultural practices and land-use, and add pressure on an already stressed groundwater system. SGMA lists climate change as a key component of groundwater sustainability plans (GSP) that must include an accounting and assessment of the total annual volume of groundwater and surface water entering and leaving a basin. The projected water budget is required to evaluate hydrologic uncertainty associated with projections.

The panel will discuss how impacts of climate change on groundwater can be characterized, evaluated, and incorporated into sustainability planning.

BEST MANAGEMENT PRACTICES AND TECHNICAL ASSISTANCE FOR INTEGRATING CLIMATE CHANGE INTO GROUNDWATER SUSTAINABILITY PLANNING

Steven Springhorn, PG, Senior Engineering Geologist, Sustainable Groundwater Management Section, California Department of Water Resources, Sacramento, CA

GROUNDWATER SUSTAINABILITY AND CLIMATE CHANGE - A GSA PERSPECTIVE

Marcus Trotta, Principal Hydrogeologist, Sonoma County Water Agency, Santa Rosa, CA

THE PERFECT STORM: A CHANGING CLIMATE IN A NEW WORLD OF GROUNDWATER REGULATION

Wes Miliband, Attorney, Stoel Rives, LLP, Sacramento, CA

INCORPORATING CLIMATE CHANGE INTO GROUNDWATER MODELS AND PLANS: A PRACTICAL GUIDE

Juliet Christian-Smith, Ph.D., Senior Climate Scientist, Union of Concerned Scientists, Oakland, CA

MODELS AND DATASETS FOR ASSESSING CLIMATE CHANGE IMPACTS ON GROUNDWATER SUSTAINABILITY

Abhishek Singh, Ph.D., Manager, California Operations, Senior Water Resources Engineer, INTERA, Torrance, CA

3:30

WRAP-UP AND ADJOURN

AMERICAN GROUND WATER TRUST (Non-profit education organization) *Ground Water Information, Awareness & Education Since 1986..... This is what we do:*



- ~ Promote efficient and effective ground water management
- ~ Communicate the environmental and economic value of ground water
- ~ Showcase ground water science and technology solutions
- ~ Increase citizen, community and decision-maker awareness
- ~ Facilitate stakeholder participation in water resource decisions



ASSOCIATION OF GROUND WATER AGENCIES

AGWA, was formed in 1994 by a group of Southern California groundwater basin management agencies to provide a unified voice to coordinate efforts and exchange information to enhance the effective management of groundwater resources. AGWA's purpose is to create a forum for the discussion of groundwater issues for entities responsible for management of groundwater basin resources.

AGWA's primary objectives are to promote:

- ◆ More effective means of enhancing management of groundwater basins
- ◆ The reliability of existing groundwater supplies
- ◆ The increase of basin yields and the protection and enhancement of groundwater quality



Texas Aquifer Conference endorsed by:
INTERNATIONAL ASSOCIATION OF HYDROGEOLOGISTS
COMMISSION - GROUNDWATER OUTREACH TO DECISION MAKERS
Background to the Commission:



World-wide, ignorance and misunderstanding of groundwater is a major barrier to effective water resources management. Groundwater professionals need to be advocates for sensible water policy to ensure that water allocation decisions are based on hydrologic reality. The Commission plans to help IAH members and IAH national chapters promote awareness and appreciation of the value of groundwater. IAH "branded" technical information in non-technical format will be developed to assist members target their expertise among policy makers, end-users and resource managers. Science-based knowledge, effectively communicated, can support the dual objectives of sustainably maximizing the use of groundwater for economic, social and environmental benefit while protecting against overdevelopment and contamination.



CALIFORNIA GROUNDWATER COALITION

CGC was formed in 2007 as a joint endeavor of the Association of Ground Water Agencies (AGWA), the Ground Water Resources Association of California (GRA) and the American Ground Water Trust (AGWT). The Coalition's principal mission is to educate policy makers about groundwater; and

promote the benefits of comprehensive groundwater management and use in legislative and other water policy arenas.

The Coalition recognizes:

- ◆ Groundwater development, conjunctive use, and groundwater storage have the capability to provide increased water supply reliability for California
- ◆ Groundwater management and monitoring are essential to the successful development and protection of the state's groundwater resources for current and future generations
- ◆ New infrastructure is needed to obtain statewide benefit from groundwater resources utilization and replenishment potential



GROUNDWATER RESOURCES ASSOCIATION OF CALIFORNIA

GRA is dedicated to resource management that protects and improves groundwater supply and quality through education and technical leadership. Its major objectives are to:

- ◆ Promote professional development of scientists, engineers, and others involved in the assessment, development, quality and management of the state's groundwater resources
- ◆ Help formulate statewide policy on the development, management, and protection of the state's groundwater resources, soil and groundwater remediation, and environmental assessments
- ◆ Disseminate scientific and technical information among GRA members and those who influence policy development concerning groundwater resources

↓ **Scroll down for registration details** ↓

ONTARIO CONFERENCE AND WORKSHOP – REGISTRATION OPTIONS:

OPTION #1 AGWA/AGWT ANNUAL GROUNDWATER CONFERENCE Wed & Thurs, Feb. 15 & 16, 2017

Call to be an event sponsor (800 423 7748)	Two Day	One Day
	Feb 15 AND 16	Feb 15 OR Feb 16
YOU MUST CHECK ONE:→	<input type="checkbox"/>	<input type="checkbox"/> or <input type="checkbox"/>
General Registration	<input type="checkbox"/> \$420	<input type="checkbox"/> \$225
AGWT Member/Gov't Employee	<input type="checkbox"/> \$395	<input type="checkbox"/> \$200
Full-Time Student (ID required at Registration)	<input type="checkbox"/> \$120	<input type="checkbox"/> \$80
Download of presentation ppts (Registrant Price)	<input type="checkbox"/> \$30	
Exhibit Table (personal registration also required)	<input type="checkbox"/> \$300	
<i>Registration Includes: access to exhibits, reception, breaks and lunch(s)</i>		

Total Option 1

OPTION #2 - CA WATER SUPPLY SYSTEMS WORKSHOP (Friday, February 17, 2017) (one day)

- General Registration \$255
- AGWT Members/Government \$220
- Full-time Student (ID required) \$ 80
- Download of presentation ppts (Registrant Price) \$ 30
- Exhibit Table (personal registration also required) \$250
- Registration includes handouts, coffee breaks & lunch
- TOTAL \$ _____

OPTION #3 - REGISTER FOR BOTH EVENTS February 15, 16 and 17, 2017 (three days) CONFERENCE & WORKSHOP

- General Registration \$600
- AGWT Members/Government \$540
- Full-time Student (ID required) \$165
- Download of BOTH presentation ppts (Registrant Price) \$ 60
- CA Groundwater Conference ONLY \$ 30
- Water Supply Workshop ONLY \$ 30
- Exhibit Table (3 days) (personal registration required) \$350
- TOTAL \$ _____

OPTION #4 SPEAKER ONLY REGISTRATION! ANNUAL CONFERENCE and/or WATER SUPPLY SYSTEMS WORKSHOP

Speakers receive complimentary registration for the day of their presentation

- Speaker **Presentation** Date Feb 15 Feb 16 Feb 17
- Speaker Additional Attend Date(s) Feb 15 - \$100 Feb 16 - \$100 Feb 17 - \$100
- Total (checked "additional attend" boxes x \$100) \$ _____

Note: Each additional attend date is specially priced for presenters at \$100 per day.

Check the box for the registration option

- Option #1 – 15 & 16
- Option #1 – 15
- Option #1 – 16
- Option #2
- Option #3
- Option #4

Register on-line at www.agwt.org/events

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