

***Let's make better use of our water resources***

# **San Joaquin Valley Groundwater Overdraft**

Can Valley end-users organize local control for regional water management?

**Not enough water – too much demand**

**American Ground Water Trust – Information Exchange Forum – Nov 18<sup>th</sup>, 2013**  
**World Ag Expo Center, 4500 S Laspina St, Tulare, CA 93274**

**Who controls supply side?  
Can it still work?**



**Who manages demand side?  
Need we go there?**

**Organized by: American Ground Water Trust**  
[A 501(c)(3) non-profit education organization]

## **WHAT THE INFORMATION EXCHANGE FORUM IS ALL ABOUT**

This regional water forum will bring together irrigation interests, engineers/hydrologists, water resource managers, agency professionals and attorneys to share current information regarding the challenges, feasibility, potential regulatory concerns and the economic and sustainability benefits of wide-ranging groundwater management activities locally, regionally and out-of-state. The emphasis is education and how the common problem of overdraft has been dealt with in varied locations throughout the western U.S.

- ◆ Presentations include case studies, groundwater law overview, historic conjunctive-use planning and current management practices
- ◆ Attendees can learn about how overdraft has been addressed elsewhere and the latest in local management programs
- ◆ The program will address the acute overdraft and related issues facing the Valley and foster discussions for future groundwater management efforts

**Kaweah Delta Water  
Conservation District**

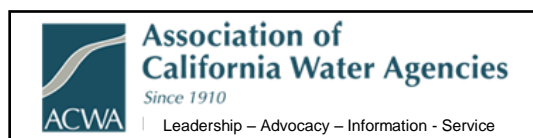


**Event hosts**

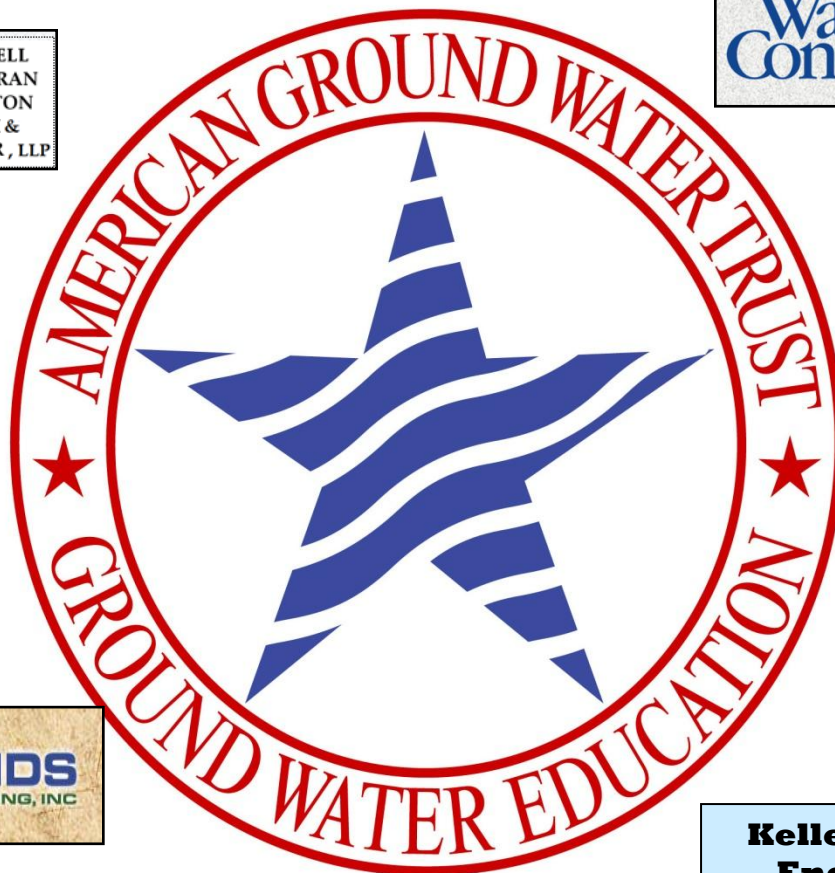


**Tulare Irrigation  
District**

**Event supporters**



## FORUM SPONSORS



**Keller & Wegley  
Engineering**



## FORUM PROGRAM

|             |                     |
|-------------|---------------------|
| <b>7:15</b> | <b>REGISTRATION</b> |
|-------------|---------------------|

8:00- 8:05     **WELCOME TO TULARE COUNTY**  
Pete Vander Poel III, Chairman, Board of Supervisors, Tulare County, CA

8:05 -8:15     **PURPOSE OF THE FORUM: GROUNDWATER MANAGEMENT CONUNDRUMS**  
Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH

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| <b>Session One - GROUNDWATER CONDITIONS: THEN AND NOW IN THE VALLEY</b><br>Moderator: Dave Orth, General Manager, Kings River Conservation District, Fresno, CA |
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8:15 – 8:45     **CHANGES IN THE CENTRAL VALLEY’S GROUNDWATER FROM PRE-DEVELOPMENT TIMES TO THE PRESENT**  
Claudia Faunt, Hydrologist, U.S.G.S. California Water Science Center, San Diego, CA

8:45 – 9:15     **THE SUPPLY SIDE ANSWER – WHAT HAPPENED?**  
Dick Moss, Vice President, Provost & Pritchard, Visalia CA

9:15 – 9:45     **GROUNDWATER MANAGEMENT POLICY: STATE WATER RESOURCES CONTROL BOARD**  
Greg Zlotnick, Delta Initiatives-Special Projects, San Luis & Delta-Mendota Water Authority, Sacramento, CA

9:45 – 10:15     **GROUNDWATER MODELING – ITS ROLE IN SETTING POLICY**  
Derrik Williams, President, HydroMetrics, Oakland, CA




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| <b>10:15 – 10:30</b> | <b>BREAK</b> |
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| <b>Session Two - GROUNDWATER CONDITIONS: IMPACTS WE CAN’T IGNORE</b><br>Moderator: Mark Larsen, General Manager, Kaweah Delta Water Conservation District, Farmersville, CA |
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10:30 – 11:00     **OVERDRAFT AND SUBSIDENCE IN THE VALLEY’S WEST SIDE**  
Chase Hurley, Manager, San Luis Canal Company, Los Banos, CA

11:00 – 11:30     **PLANNING FOR IMPROVED GROUNDWATER MANAGEMENT IN KERN COUNTY**  
Jason Gianquinto, General Manager, Semitropic WSD, Wasco, CA

11:30 – 12:00     **PASO ROBLES AND PENDING GROUNDWATER OVERSIGHT**  
Peter Leffler, Associate Hydrogeologist, Fugro Consultants Inc., Oakland, CA

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| 12:00 – 1:15 | <b>LUNCH</b> | <b>COMMENTS ON GROUNDWATER OVERDRAFT IN THE VALLEY</b><br><br><div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><b>SPECIAL GUEST</b></p> </div> <div style="text-align: center;">  <p><b>Jim Patterson, California Assembly, District 23</b></p> </div> </div> |  |
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| <b>Session Three - GROUNDWATER MANAGEMENT: HOW ARE OTHERS TAKING ON THE ISSUES?</b><br>Moderator: Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH |
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1:15pm to 3:15pm

**COMING TO TERMS WITH OVERDRAFT IN TEXAS**  
Bridget Scanlon, Senior Research Scientist, Bureau of Economic Geology, Austin, TX

**DEALING WITH OVERDRAFT IN THE OGALLALA AQUIFER – THE KANSAS APPROACH**

Burke Griggs, Consulting Professor, Bill Lane Center for the American West, Stanford University;  
Assistant Attorney General, State of Kansas, Topeka, KS

**GROUNDWATER IN THE SOUTH PLATTE BASIN IN COLORADO – WHAT A TANGLED WEB THE COURTS AND LEGISLATURE HAVE WOVEN**

Robert Longenbaugh, Groundwater Consultant, Fort Collins, CO

**GROUNDWATER OVERDRAFT IN THE L.A. BASIN – PROBLEM SOLVED?**

Ted Johnson, Chief Hydrologist, Water Replenishment Dist. of Southern California, Lakewood CA

**STRIKING A BALANCE: UTILIZING THE SANTA CLARA RIVER FOR OPTIMAL GROUNDWATER MANAGEMENT**

Tony Morgan, Groundwater Department Manager, United Water Conservation District, Santa Paula, CA

3:15– 3:30

**BREAK**

**Session Four - GROUNDWATER MANAGEMENT: WHAT CAN HAPPEN NEXT?**

Moderator: J. Paul Hendrix, General Manager, Tulare Irrigation District, Tulare, CA

3:30 – 4:00

**OVERDRAFT – WHO CAN PUT THE BRAKES ON?**

Brad Herrema, Attorney, Brownstein Hyatt Farber Schreck, Santa Barbara, CA

4:00 – 4:30

**WHAT LEGISLATION MAY BE IN THE SACRAMENTO “PIPELINE”?** [No PowerPoint available]

Tim Quinn, CEO, Association of California Water Agencies, Sacramento, CA

4:30 – 4:45

**WRAP-UP: WHERE DO WE GO FROM HERE?**

David Zoldoske, Director, Center for Irrigation Technology, CSU, Fresno, CA

4:45 – 5:45

**NETWORKING OPPORTUNITY - Cash Bar**



**AMERICAN GROUND WATER TRUST** (Non-profit 501(c)(3) education organization)  
*Ground Water Information, Awareness & Education Since 1986..... This is what we do:*



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



**Groundwater Management Programs**

Since 1999, the American Ground Water Trust has convened 37 conference programs that have featured aquifer management. The AGWT's mission-focus on resource sustainability and effective groundwater management is the rationale for our promotion of information exchange programs on ground water management issues and our showcasing of aquifer storage technologies.

There is a strong ongoing need to educate the public, and capture the imagination of decision-makers about the economic and environmental benefits of creative use of sub-surface water resources. Ongoing drought conditions, predictions of the hydrologic implications of changing weather patterns and political uncertainty regarding regional water transfers more than justify increased attention to the benefits of using groundwater resources as an essential component for optimizing water resources.



This Tulare Groundwater Management Program is 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 objective is 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 is being 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.

Andrew Stone (USA), Executive Director of the American Ground Water Trust, is the Commission Director with co-Directors Karen G. Villholth (Denmark), Senior Researcher, Geological Survey of Denmark & Greenland and José Joel Carrillo Rivera (Mexico), Professor, Universidad Nacional Autónoma de México. Are you an IAH member? Want to help the Commission? Contact Andrew Stone ([astone@agwt.org](mailto:astone@agwt.org))





# San Joaquin Valley Groundwater Overdraft

## PRESENTER BACKGROUND



### **Pete Vander Poel III, Chairman, Board of Supervisors, Tulare County, CA**



Supervisor Pete Vander Poel III serves as Tulare County Supervisor representing District Two, which includes the City of Tulare, the communities of Allensworth, Alpaugh, Earlimart, Pixley, Tevison, Tipton, Richgrove, Woodville and Waukena, and surrounding rural areas. He was first elected to the Board of Supervisors in 2008 and took office in January 2009.

Supervisor Vander Poel was born and raised in Tulare County. He was educated in the Tulare public school system, graduating as a Valedictorian from Tulare Union High School. He then went on to graduate Cum Laude from the College of Honors University of California, Los Angeles, with a Bachelor of Arts in Environmental Studies and a minor in Accounting

### **Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH**



Andrew Stone is a hydrogeology graduate from London University. He has experience in Africa and the US as a university professor, groundwater consultant, advocate & educator. He has convened over one hundred and fifty conference programs related to well design, groundwater management, aquifer storage recovery, conjunctive use, geothermal technology, hydraulic fracturing, water banking, and asset management. He is a recipient of the National Ground Water Association "Oliver Award" in recognition of his work in promoting groundwater education. He is Director of the International Association of Hydrogeologists *Commission on Groundwater Outreach to Decision Makers*. From 1990 to 2002, as adjunct faculty, he taught an annual course on Ground Water Protection Policy in the Masters Degree Program at Antioch New England Graduate School

### **Dave Orth, General Manager, Kings River Conservation District, Fresno, CA**



David L. Orth became KRCD's general manager in February 2002. Before coming to KRCD, Orth served for two years as Vice President of Resource Management for Woolf Enterprises, a diversified San Joaquin Valley farming operation and from 1995-2000 as General Manager of Westlands Water District. Prior to becoming Westland's manager, Orth served as the district's director of finance for nine years and was responsible for the district's financial management and the \$40-\$50 million annual operating budget.

Orth is deeply involved in the development of sustainable policies for local groundwater management and water quality protection. He serves on the board of directors and the federal affairs and groundwater committees of the Association of the California Water Agencies. Orth also serves on Fresno County's Water Advisory Committee and the Board of the Water Education Foundation.

### **Claudia Faunt, Hydrologist, U.S.G.S. California Water Science Center, San Diego, CA**



Claudia Faunt (Ph D, PE) has been a Hydrologist with the U.S. Geological Survey for 25 years, where she has been studying regional ground-water flow systems. She has been in the San Diego office of the California Water Science Center for the past 15 years. Her research has specialized in hydrogeologic framework modeling, visualization of geologic and ground-water data, incorporation of hydrologic and geologic spatial information into ground-water models, and more recently in regional groundwater flow modeling. Current studies include regional ground-water flow and texture analyses of the Borrego Valley and Central Valley of California. Recently, she has become the Program Chief for the Groundwater Framework and Applied Modeling section of the California Water Science Center.

**Dick Moss, Vice President, Provost & Pritchard, Visalia, CA**



Dick Moss (PE) is a principal for the civil and agricultural engineering consulting firm of Provost and Pritchard Consulting Group, assisting local and regional water agencies and others in the development of water management plans, programs, and funding to meet current and future water needs. He has over thirty-five years of experience in agricultural engineering, civil engineering, water resources planning and policy development, major conveyance facility operation and maintenance, government relations, contract/agreement development, organizational management and agricultural water conservation. Previously Dick Moss was the principal engineer/owner of RM Moss & Associates, Exeter, California. Prior to that, Dick Moss served as the General Manager of the Friant Water Users Authority.

**Greg Zlotnick, San Luis & Delta-Mendota Water Authority, Sacramento, CA**



Greg joined the San Luis & Delta Mendota Water Authority's Sacramento office in March of this year. He has been actively involved with California water policy for over 25 years, and is a well-respected leader in California's water community. He served for more than a decade as an elected Board member of the Santa Clara Valley Water District. Greg is completing his 14<sup>th</sup> year as a member of the Board of Directors of the Association of California Water Agencies having served multiple terms, and currently, as chair of its Groundwater Committee, and is a past Chair of the Water Management and Federal Affairs committees. He is a former Board member of the National Water Reuse Association, the National Water Resources Association, the American Ground Water Trust, and the Urban Water Institute of California.

**Derrik Williams, President, HydroMetrics, Oakland, CA**



Derrik Williams is a California Professional Geologist and Certified Hydrogeologist. Mr. Williams has more than 26 years of experience as a groundwater consultant in California, and has helped manage groundwater basins and watersheds throughout the State.

Mr. Williams has developed, adopted, and implemented groundwater models throughout the State of California and across the U.S. Mr. Williams provides groundwater modeling and groundwater management expertise for numerous areas with extensive agricultural development. Mr. Williams is currently managing the development and calibration of the Integrated Water Flow Model for the Kings River Conservation District.

He currently sits on the data committee of the Governor's Drinking Water Sustainability Group: a group addressing the water needs of California's disadvantaged communities.

**Mark Larsen, General Manager, Kaweah Delta Water Conservation District, Farmersville, CA**



Mark Larsen is General Manager for Kaweah Delta Water Conservation District in the southern San Joaquin Valley. He has worked for the District managing projects, developing water management policy, and engaged in developing and maintaining District relationships with various local entities towards groundwater mitigation, water transfers, water education and conservation since 2002. He also serves as the Watermaster for the Kaweah and St. Johns Rivers Association, is the Manager for the Kaweah River Power Authority, the Coordinator for the Kaweah River Sub-watershed of the Southern San Joaquin Valley Water Quality Coalition, and sits on the board for both the Tulare County Water Commission and Flood Commission. Mr. Larsen holds a Bachelor of Science degree in Industrial Technology from California State University, Fresno.

**Chase Hurley, Manager, San Luis Canal Company, Los Banos, CA**



Chase Hurley was born and raised on a small family farm in Los Banos, California. He raised dairy cattle in high school and migrated to Cal Poly San Luis Obispo where he received his degree in Ag Business Marketing.

The first five years of his professional career were spent in the agricultural production field relating to poultry, onions and garlic. Beginning in 1994, he went to work for Panoche Water District working on finance and policy issues. He became the General Manager of San Luis Canal Company in 2004.

He represents over 300 landowners with an agricultural base of 45,000 irrigable acres. Chase is an alumnus of the California Agricultural Leadership Program, having completed his two year commitment in 2006.

#### **Jason Gianquinto, General Manager, Semitropic WSD, Wasco, CA**



Jason Gianquinto joined the Semitropic Water Storage District as the Deputy General Manager in 2010 and was named General Manager in 2013. Semitropic, established in 1958, is one of eight water storage districts in California and covers an area of more than 220,000 acres in Kern County. The District delivers surface water to approximately 140,000 acres for agricultural uses and provides groundwater storage services to Banking Partners in both Northern and Southern California. Mr. Gianquinto is actively involved in Kern County Water Issues through his participation as a Director of the Kern County Farm Bureau, Board member of the Kern Water Bank Authority, Trustee of the Southern California Water Committee and through his affiliation with the Water Association of Kern County. Mr. Gianquinto is a licensed civil engineer in the States of California and Arizona with focused professional engineering experience in the water and wastewater industry. Jason has a

Bachelor of Science degree in Environmental Engineering from Northern Arizona University, a Master of Science degree in Engineering Management and a Master of Business Administration from Cal Poly San Luis Obispo.

#### **Peter Leffler, Associate Hydrogeologist, Fugro Consultants Inc., Oakland, CA**



Mr. Leffler has a B.S. in Geology from University of Illinois, and a M.S. in Hydrology/Hydrogeology from University of Nevada Reno. He is a Professional Geologist and Certified Hydrogeologist in California. Mr. Leffler has 24 years of experience working as a consulting hydrogeologist in the San Francisco Bay Area. Since 2002, Mr. Leffler has been working for Fugro Consultants where he is currently an Associate Hydrogeologist working primarily for water districts on groundwater supply projects. His experience includes test well and municipal well installation, aquifer testing and analysis, regional groundwater basin assessments, groundwater modeling, and expert witness work. He has worked on several projects, including regional groundwater basin analyses and modeling studies, in Tulare, Madera, Kern, and San Luis Obispo counties.

#### **Andy Vidak, California State Senate, 16th District, Hanford, CA**



Andy Vidak is a Republican member of the California Senate elected in July of 2013. Andy and his siblings are the third generation of his family born and raised in the Valley. The oldest of five children, Andy graduated from Redwood High School in 1984. He attended Visalia's College of the Sequoias and California State University at Fresno before graduating from Texas Tech University with a Bachelor of Science degree in Animal Business. As an active, lifelong Central Valley resident and farmer, Andy has developed a keen understanding of the economic and water issues that have created the current financial crisis that plagues California today. Andy has worked closely with agricultural advocacy groups such as Families Protecting the Valley. He's also taken leadership roles in developing new approaches and solutions to the water, economic and regulatory problems that hamper our Central Valley.

#### **Jim Patterson, California Assembly, District 23, Fresno, CA**



Jim Patterson is a Republican member of the California State Assembly, representing District 23. He was first elected to the chamber in 2012. Jim is a 30 year local small business owner and broadcast executive. He has owned and operated radio stations in California and Idaho, and is presently the Managing Partner of radio station KGED, 1680 AM, in Fresno. Jim served as the Mayor of Fresno for two terms from 1993-2001. When his two terms were completed, Jim had left Fresno with a \$20 million general fund surplus, a AAA credit rating, over a billion dollars of new business approvals that created thousands of new jobs, and a reborn reputation for achievement that the National Civic League recognized when it designated Fresno an All American City in 2000. He serves on the following water-related house committees: Natural Resources, Water, Parks and Wildlife, Select Committee on Regional Approaches to Addressing the State Water Crisis.



**Bridget Scanlon, Senior Research Scientist**, Bureau of Economic Geology, Austin, TX



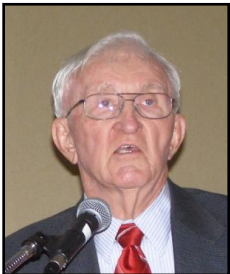
Dr Scanlon has a BA from Trinity College Dublin, an MS from the University of Alabama and a Ph.D. from the University of Kentucky. Bridget's research interests include water and sustainability; evaluation of the impact of climate variability and land use change on groundwater resources; the application of numerical models for simulating variably saturated flow and transport; and the assessment of natural and anthropogenic contamination of aquifers. She leads the Sustainable Water Resources Program of the Bureau of Economic Geology which includes research scientists, postdoctoral fellows, and graduate research assistants working on topics such as estimation of groundwater recharge in semiarid and arid regions using field studies; evaluating impacts of climate variability (ENSO) on recharge, monitoring ecohydrologic controls on the water balance using remote and ground based measurements, monitoring soil moisture, evaluating controls on groundwater arsenic contamination; and source attribution and processes affecting nutrients, particularly nitrate.

**Burke Griggs, Consulting Professor, Bill Lane Center for the American West, Stanford University; Assistant Attorney General, State of Kansas, Topeka, KS**



Over the academic year 2013-2014. Burke Griggs is a Consulting Professor at the Bill Lane Center for the American West at Stanford University. He is Legal Counsel at the Division of Water Resources, Kansas Department of Agriculture. He represents DWR and Kansas in interstate water litigation and interstate river compacts, represents DWR in state court and advises KDA and DWR on water policy and legislation. He was previously Assistant Professor of history, Boston College and an attorney, Stevens and Brand, LLP. He has a BA from Stanford, a PhD from Yale and a JD from the University of Kansas Law School.

**Robert Longenbaugh, Groundwater Consultant, Fort Collins, CO**



Robert Longenbaugh. was a professor in the Civil Engineering Department at Colorado State University for 19 years followed by 11 years as Assistant State Engineer in the Ground Water Section at the Colorado Division of Water Resources. Since retiring from the state he has undertaken many consulting assignments related to groundwater. During his professional career he has conducted hydrologic research across the state of Colorado, concentrating mainly on the eastern Plains and the South Platte Valley and has extensive knowledge and experience related to Colorado's agriculture water issues.

Bob Longenbaugh, graduated from CSU's agricultural engineering program, with a bachelor's degree in 1957 and master's degree in 1962. His published groundwater research data and reports are now a principal component of the Groundwater Data Collection in the CSU Water Resources

Archive in the Morgan Library, a joint effort of the University Libraries and the Colorado Water Resources Research Institute.

**Ted Johnson, Chief Hydrologist, Water Replenishment Dist. of Southern California, Lakewood CA**



Ted Johnson is the Chief Hydrogeologist at the Water Replenishment District of Southern California. He leads the Basin Management and Water Quality Department, providing technical analysis, review, and oversight for projects related to artificial recharge, seawater intrusion, groundwater quality, conjunctive use, computer modeling, recycled water, tracer tests, and groundwater production. Ted received his B.S. and M.S. degrees from the California State University at Fullerton and is a California Registered Geologist and Certified Hydrogeologist with over 20 years of experience in Southern California groundwater investigations.

**Tony Morgan, Groundwater Department Manager, United Water Conservation District,**



Tony Morgan (PG, CHG) holds graduate and undergraduate degrees in Geology from Indiana University and has been with UWCD since 2009; prior to that he was Western Region Manager for Layne Geosciences. The Groundwater Department is responsible for providing hydrogeological expertise to assist the District in managing groundwater resources in eight basins. The department operates an extensive hydrologic data collection system that includes water level measurements (~400 wells), water quality sampling and analysis (~160 wells), and stream gauging on the Santa Clara River and associated tributaries. The department also maintains and updates the regional groundwater flow model, performs field investigations (e.g., surface geophysical surveys) to improve the District's understanding of the controls on groundwater flow, evaluates the impacts of groundwater utilization and conservation options on resource availability and serves as an in-house and County-wide resource on groundwater supply, water quality, and water resource management. Ventura County ranks 14th among all counties in the U.S. in agricultural production, with over 1.5 billion dollars in annual revenues, largely due to reliable water. Since 2008 Tony Morgan has served as a Director on the Board of the American Ground Water Trust and has been the President of the Groundwater Resources Association of CA - Central Coast Branch since 2011.

**J. Paul Hendrix, General Manager, Tulare Irrigation District, Tulare, CA**



Mr. Hendrix has a broad background in water resources engineering, planning and management. He has held positions with various consulting engineering firms engaged water resources projects. He has also served with several public water agencies, including The Metropolitan Water District of So. Calif. in Los Angeles, Belridge Water Storage District in Kern County and, in his current capacity, as General Manager of the Tulare Irrigation District. There he oversees the district's water operations for delivery and groundwater recharge, water supply acquisition, and strategic planning. Formed in 1889, TID now serves 65,000 acres of irrigated agriculture with water from the Kaweah River and the Friant Unit of the Central Valley Project, conducts groundwater recharge via use of 1,300 acres of recharge basins, and partners with the cities of Tulare and Visalia on sundry conjunctive use management projects.

**Brad Herrema, Attorney, Brownstein Hyatt Farber Schreck, Santa Barbara, CA**



Brad is a Shareholder in Brownstein Hyatt Farber Schreck's Santa Barbara office and a member of the Water & Public Lands Group. His practice includes a broad range of water issues in California and Nevada, including strategic water supply planning, water rights permitting and regulatory compliance, adjudications of groundwater rights, water utility concerns, Indian water rights and environmental matters affecting water use, including CEQA compliance and water quality issues, including those arising under the federal Clean Water Act and California Porter-Cologne Water Quality Control Act. Brad works closely with numerous public water agencies, special districts, private landowners and water utilities, assisting them with transactional negotiations, litigation and administrative agency proceedings.

**Tim Quinn, CEO, Association of California Water Agencies, Sacramento, CA**



As executive director of the Association of California Water Agencies (ACWA), Timothy Quinn leads the largest water organization of its kind in the nation. With offices in Sacramento and Washington, D.C., ACWA is a statewide association whose 450 local public water agency members are responsible for about 90% of the water delivered in California.

Quinn, who became ACWA executive director in July 2007, has more than 25 years of experience in California water issues. He has worked on several key policy initiatives, including the Bay-Delta Conservation Plan now under development to protect species and provide regulatory assurance to water users. He also participated in negotiation of the 2002 Sacramento Valley Water Management Agreement, the 2000 CALFED Record of Decision, the 1995 Monterey Agreement, the 1994 Bay-Delta Accord, and a number of water transfer agreements.

Prior to joining ACWA, Quinn served as deputy general manager of the Metropolitan Water District of Southern California and represented the district on numerous statewide issues since 1994. He joined MWD in 1985 as principal economist, and became deputy general manager in 1994.

**David Zoldoske, Director, Center for Irrigation Technology, CSU, Fresno, CA**



David Zoldoske is the Director for the Center for Irrigation Technology, and related water programs at California State University Fresno, and serves as the Executive Director for Water Resources and Policy Initiative for the California State University system. He holds a BS in Agricultural Business and an MS in Agriculture from California State University, Fresno, and has an Ed.D. in Management from the University of LaVerne. He is also a Certified Irrigation Designer (CID). David is a past president of the nationally based Irrigation Association, past president of the American Society of Agronomy (California Chapter), and served as vice-chair of the AB2717 Landscape Task Force. He has served as an ANSI appointed US delegate to the ISO/TC 23/SC/18 Irrigation Equipment committee. David has authored or co-authored over 100 articles on water and irrigation. David is an adjunct professor, and has taught classes at university and community colleges in “pumps and motors” and “irrigation”.

He has 30+ years of professional experience in irrigation.

