

"Get smart with your water well assets!"

A state-of-the-art technical training and information-exchange opportunity for growers, irrigators and groundwater pumpers

MAKE SURE YOU MAXIMIZE YIELD FROM YOUR WATER WELLS

An educational workshop program from the American Ground Water Trust in collaboration with Hartnell College - Technical Education & Workforce Development

Friday, January 25th 2019 - Hartnell College Alisal Campus, Room 212, 1752 E. Alisal Street, Salinas, CA 93905

Previous American Ground Water Trust education workshops with a focus on Wells and Pumping in California have been held in Sacramento, Stockton, Bakersfield, Fresno, Tulare, Lakewood and Ontario



**HARTNELL
COLLEGE**

SGMA recognizes that there is competition for groundwater. With increased scrutiny on pumping, to achieve "more crop per drop" growers must optimize well performance and follow state of the art technology in well design, construction and operation. This workshop provides a great learning opportunity for irrigation growers, well owners, and farm management water professionals on the latest practical, cost-effective solutions. The program will explain how to maximize the economic return on pumped groundwater by correct pump selection, well operation and the use of real-time data to effectively match well pumping to aquifer conditions and water demands.



Continuing Education

Approved by State of CA for Drinking Water Operators – 7.0 Contact Hours

Approved by State of CA for Water Well Drillers & Pump Installation Contractors – 7.0 Contact Hours

Approved by IA for Agricultural Irrigation Specialists & Irrigation Designers – 6.5 Hours, Course #IA01191-6.5A

The AGWT will issue Certificates of Attendance for engineers and other professions

WORKSHOP SPONSORS (please join them):



To become a workshop sponsor or exhibitor visit our website at www.agwt.org/events or call AGWT at 800 423-7748.

PROGRAM PRESENTED BY AMERICAN GROUND WATER TRUST (a 501(c)(3) non-profit education organization)



7:30 – 8:30 **REGISTRATION (Coffee & donuts) Network with exhibitors**

8:30 - 8:45

MEASUREMENT OF HYDROLOGIC INPUTS AND OUTPUTS: THE KEY TO WATER RESOURCES MANAGEMENT

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

[To manage you need to measure. Measurement produces data. SGMA requires data-based management. Well design & construction, pumping efficiency and aquifer characteristics impact data used to determine sustainability.]

8:45 – 9:30

WELL & PUMP EFFICIENCY IS NOT A MYTH

David Kill, PE, Training Consultant, Xylem Goulds Water Technology, St. Paul, MN

[The cost of irrigation water is directly connected to well and pump efficiency. The presentation will discuss the basis for pump selection and show basic calculations that can be used to monitor water well efficiency and pump performance.]

9:30 – 10:15

DESIGN AND OPERATION PRINCIPLES FOR MAXIMIZING WELL EFFICIENCY

Kevin McGillicuddy, PG, Chief Hydrogeologist, Roscoe Moss Company, Los Angeles, CA

[Stainless steel for your well? What are the economics of the selection of casing and screen materials? What criteria from the driller's log or down-hole geophysics are used to determine screen position, length, slot size and diameter to optimize performance and ensure well longevity?]

10:15 – 10:40 **BREAK** **Network with exhibitors**

10:40 – 11:25

WATER WELL DESIGN CONSIDERATIONS FOR THE SALINAS VALLEY

Bryan DeMucha, PG, Associate Geologist, Wood Rodgers, Sacramento, CA

[With a new focus on achieving groundwater sustainability, it is important to understand how local geology, influences groundwater and how pumping and water level changes can impact water quality and subsidence. "Know your well" for SGMA compliance is now a priority for Salinas Valley agricultural, industrial and municipal groundwater users.]

11:25 – 12:00

HYDRAULIC EFFICIENCY AND ECONOMIC BENEFITS OF FLEXIBLE PIPE FOR WATER WELL AND IRRIGATION APPLICATIONS

Carlos Guerra, Technical Advisor, Hose Solutions, Phoenix, AZ

[Flexible drop pipe for submersible pumps and lay-flat hose for surface applications can provide economic benefits for irrigation end users because of the simplicity of installation. Flexible pipe also has properties that make for greater hydraulic efficiency over rigid pipes.]

12:00 – 1:00 **LUNCH (provided)** **Network with exhibitors**

1:00 – 1:45

WELL DEVELOPMENT AND ASSESSMENT TECHNIQUES

Chris Johnson, PG, CHG, Founder and Principal Hydrogeologist, AEGIS, Fresno, CA

[Return on investment should be the main operating criteria for water wells. Decades of experience with Central Valley wells show that most wells do not optimize pumping potential. Down-hole videos of well problems can aid in providing technical and operational "fixes" to restore performance.]

1:45 – 2:30

USE OF REAL-TIME DATA TO EFFECTIVELY MATCH WELL PUMPING TO AQUIFER CONDITIONS AND WATER DEMANDS

Greg Allen, VP and Principal, REDtrac, LLC, Bakersfield, CA

[Real time information and timely reports showing pumping and standing water levels, pump efficiency, specific capacity, actual energy costs per acre foot, and applied water are vital to effective farm operations. When coupled with soil moisture, weather and field-specific ET measurement growers and operators can manage their groundwater.]

2:30 – 2:45 **BREAK** **Network with exhibitors**

2:45 – 3:30

HOW VERTICAL PROFILES OF WELLS (GEOPHYSICAL TECHNIQUES) CAN BE THE BASIS FOR DECISIONS ABOUT WATER QUALITY AND PUMP PLACEMENT

Bill Pedler, President, REALtime Aquifer Services (RAS), Golden, CO

[In new and in existing wells there are inexpensive down-hole measurement techniques using geophysical equipment that can provide detailed information about the best water producing zones from an aquifer. These techniques can also pin-point zones where water quality might be a concern for crop production.]

3:30 – 4:15

FARMING DECISION SUPPORT - WATER MANAGEMENT MADE EASY

Kevin Langham, Senior Project Manager, Water and Energy Products, PowWow Energy, Inc., San Mateo, CA

[Providing base-line information, integrating on-farm data streams and tracking irrigation scheduling can help growers produce more crop-per-drop and also reduce energy costs for pumping. Hardware free platforms are emerging as a vital tool for the agricultural industry in a time of increasing focus on groundwater sustainability.]

4:15 **FINAL Q & A AND WRAP-UP**

4:30 **ADJOURN** and continuing education sign-out