

GROUNDWATER & WATER WELLS

Current groundwater issues in Oklahoma
 Effective & economic well design and operation

(Conference/workshop - 8:00am to 4:30pm)

Tuesday, November 14th, 2017 Best Western Plus Saddleback Inn &
 Conference Center, 4300 SW 3rd St, Oklahoma City, OK 73108.



An American Ground Water Trust education program



Continuing Education

AGWT will issue Certificates of Attendance (Engineers & other professions)

Water Well Drillers and Pump Installers – Approved: 8.0 CEU hours

Water Operators – Approved: 6.0 Hours. Course #s 14278 (Option 1) and 14279 (Option 2)



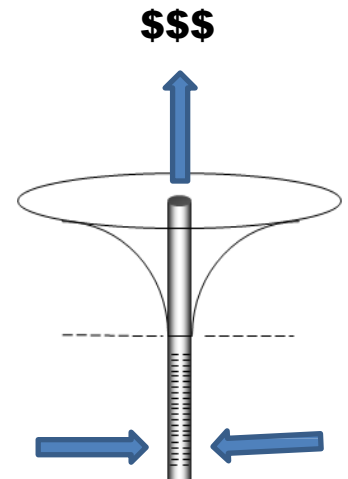
Program Sponsors



Who should be there?

Groundwater managers, water supply planners, utility supply professionals, well contractors, pump installers, water well equipment suppliers, water well owners, end-users and operators of high-yield water wells, groundwater specialists, water supply engineering & design consultants, water supply permitting and water quality regulatory officials

- WATER FUTURE IN OKLAHOMA**
- REDUCING WATER WELL LIFE-CYCLE COSTS**
- WHAT DOES AQUIFER SUSTAINABILITY MEAN?**
- GROUNDWATER SUPPLY ASSET MANAGEMENT**
- HYDROGEOPHYSICS TO FIND WATER FOR FRACKING**
- DEEP WELL INJECTION AND EARTHQUAKE RESPONSE**
- MATCHING DRILLING TECHNOLOGY TO THE GEOLOGY**
- GARBER WELLINGTON AQUIFER AS A SUPPLY SOURCE**
- WELL HYDRAULICS: PUMP SELECTION TO MAXIMIZE YIELD**
- ROLE OF GROUNDWATER IN LONG TERM SUPPLY PLANNING**
- USING CHEMICALS TO INCREASE WATER WELL PRODUCTIVITY**
- WELL DESIGN CRITERIA TO OPTIMIZE RETURN ON INVESTMENT**
- COMMUNICATING INNOVATIONS IN WELL DESIGN & OPERATION**
- HOW AND WHY TO SELECT INTELLIGENT PUMP VARIABLE FREQUENCY DRIVES**



MORNING SESSION TUESDAY NOVEMBER 14

7:00am – 8:00am REGISTRATION (coffee & pastries)

8:00am - 8:10am
INTRODUCTION – US GROUNDWATER PRIORITIES
Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH

8:10am – 8:50am
WHAT IS THE ROLE OF GROUNDWATER IN LONG-TERM SUPPLY PLANNING FOR THE STATE?
Michael Keester, Project Manager/Hydrogeologist, Leonard Rice Engineering, Round Rock, TX

8:50am - 9:30am
DEEP WELL INJECTION AND EARTHQUAKE RESPONSE
Kyle E. Murray, Hydrogeologist, Oklahoma Geological Survey, Norman, OK

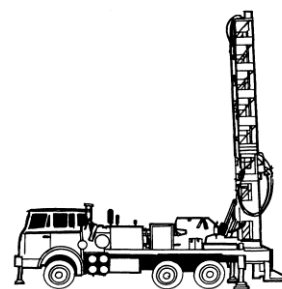
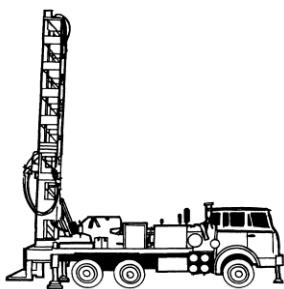
9:30am – 10:10am
THE CHALLENGE OF COMMUNICATING INNOVATIONS ON WATER WELL DESIGN, OPERATION AND EFFICIENCY TO ENGINEERS, CONTRACTORS AND END-USERS
Kevin McGillicuddy, Senior Hydrogeologist, Roscoe Moss Company, Los Angeles, CA

10:10am – 10:30am BREAK

10:30am - 11:15am
HOW TO DRIVE DOWN LIFE-CYCLE COSTS WITH WELL MANAGEMENT AND MAINTENANCE
Neil Mansuy, Vice President - Technical, Subsurface Technologies, Kansas City, MO

11:15am – 12:00pm
PAST PRESENT AND FUTURE: GARBER WELLINGTON AQUIFER AS A SUPPLY SOURCE
John Harrington, Water Resources Division Director, Association of Central Oklahoma Governments (ACOG), Oklahoma City, OK

12:00pm – 1:10pm LUNCH (provided)



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



AFTERNOON SESSION – OPTION 1

1:10pm - 1:50pm

INVESTMENT AND PROFIT: NEW DIRECTIONS IN GROUNDWATER

Todd Halihan, Professor, Boone Pickens School of Geology, Oklahoma State University, Stillwater, OK

1:50pm - 2:30pm

ENHANCED AQUIFER RECHARGE: MANAGING RURAL LANDSCAPES TO ENHANCE BASE-FLOW AND PROVIDE MARKETABLE WATER CREDITS

Guy Sewell, Professor, Robert S. Kerr Endowed Chair, Executive Director, Institute for Environmental Science Education and Research, East Central University, Ada, OK

2:30pm – 3:10pm

WATER FUTURE IN OKLAHOMA

Ken Senour, Senior Vice President, Director, Engineering & Environmental, and Larry Roach, Water Resources Program Manager, Guernsey, Oklahoma City, OK

3:10pm - 3:25pm

BREAK

3:25pm – 4:05pm

USE OF HYDROGEOPHYSICS TO ASSESS POTENTIAL FOR FRESH AND BRACKISH WATER SUPPLIES IN THE STACK AREA FOR FRACKING

Kevin Rigsby, Manager of Geology and Geophysics, Hydro Resources, Inc., Tulsa, OK

4:05pm - 4:30pm

GROUNDWATER SUSTAINABILITY: WHAT DOES IT MEAN? CAN IT BE ACHIEVED?

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

4:30pm

WRAP-UP AND CONTINUING EDUCATION SIGN-OUT

AFTERNOON SESSION – OPTION 2

1:10pm – 2:05pm

THE BASICS OF WELL HYDRAULICS (FROM AQUIFER TO WELL TO PUMP)

SELECTION AND MAINTENANCE OF PUMPS FOR MAXIMIZING WELL YIELD/ COST BENEFITS

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

2:05pm – 3:00pm

INTELLIGENT PUMP VARIABLE FREQUENCY DRIVES MAXIMIZE PRODUCTION AND EFFICIENCY

Dan Peters, Applications Engineer, Yaskawa America, Inc., Cypress, CA

3:00pm – 3:10pm

BREAK

3:10pm – 3:50pm

WELL PERFORMANCE SOLUTIONS

Kevin McGinnis, President, Cotey Chemicals, Lubbock, TX

3:50 - 4:30pm

BENEFITS OF REVERSE CIRCULATION: MATCHING DRILLING TECHNOLOGY TO GEOLOGICAL CONDITIONS

Fred Rothauge, Business Development Manager, Hydro Resources, Fort Lupton, CO

4:30pm

WRAP-UP AND CONTINUING EDUCATION SIGN-OUT