



# GROUNDWATER GEOPHYSICS APPLICATIONS TO GROUNDWATER EXPLORATION AND AQUIFER CHARACTERIZATION



**Webinar – Wednesday, January 12, 2022 - 12:30pm – 4:50pm (Eastern time zone)**

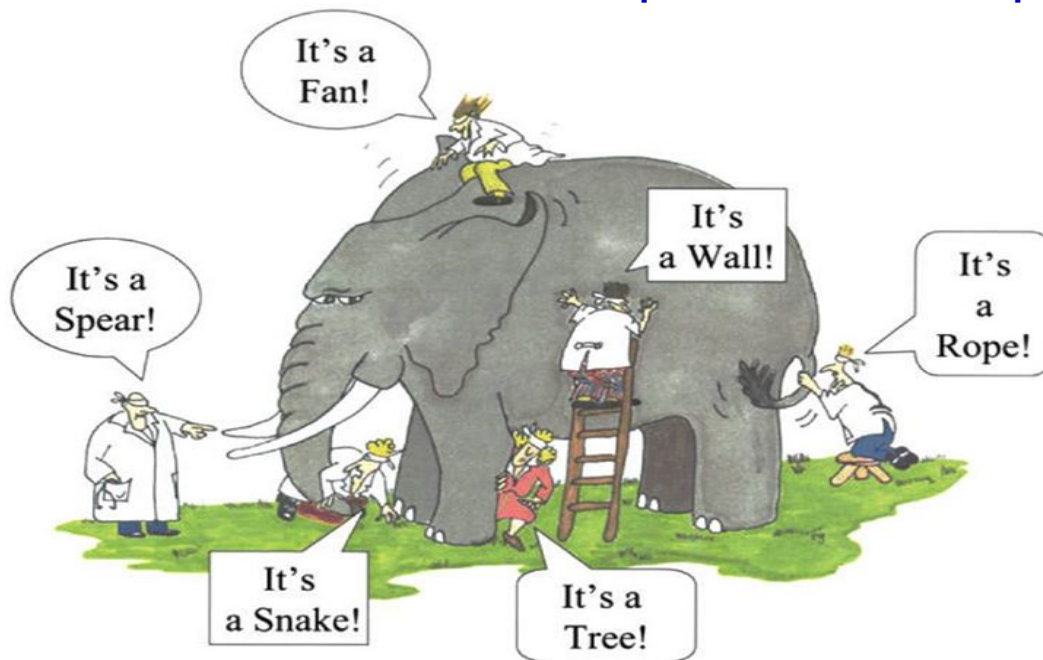


An information-exchange program from the American Ground Water Trust  
In cooperation with the Society of Exploration Geophysicists



Geophysical surveys are an economic and powerful tool for developing accurate conceptual site models and groundwater flow models. To use these tools wisely you need to understand what tools are available and be able to judge the results you are given.

**Groundwater studies are grossly under-sampled, and lack of data can lead to the classic “Blind Man and the Elephant” errors in interpretation.**



## BACKGROUND:

Drought, and the resulting increased pressure on groundwater resources has highlighted the importance for water managers to understand **the potential and the limits** of their groundwater inventory. Developing aquifer models can help groundwater managers better understand “cause & effect” for aquifer depletion, recharge and pumping operations. Geophysical methods, airborne or land-based, are often the least expensive way to quantify groundwater more accurately. Consultants, seeking to sub-contract geophysical investigations, will benefit from understanding how the current state-of-the-art capabilities for geophysical technology can generate data for hydrogeologic models and identify aquifer target zones

## PARTICIPATION:

This webinar will inform hydrogeologists and groundwater end-users (municipal, agricultural, and commercial) about the latest geophysical technology in identifying groundwater resources and in assessing aquifer potential. The rapid access to data from geophysical investigations can have significant cost and time savings for mapping groundwater systems, quantifying aquifer potential in terms of water quantity and quality and optimizing favorable locations for drilling.

## FORMAT:

Presenters will make live presentations via Zoom with Q&A opportunity after each speaker and at the conclusion of the webinar. All presenters will share technical expertise and provide information, advice, guidance, and insight in an inclusive, generic, and non-commercial information-exchange format.

## AMERICAN GROUND WATER TRUST CORPORATE SUPPORTERS AND EVENT SPONSORS:



We will be pleased to list additional sponsors for this Groundwater Geophysics webinar. See registration page or website ([www.agwt.org/events](http://www.agwt.org/events)) for sponsor options

## CONTINUING EDUCATION:

The American Ground Water Trust will issue a certificate of participation to registered attendees who are logged-in for the duration of the webinar and complete a Continuing Education Form.

### The SOCIETY OF EXPLORATION GEOPHYSICISTS (SEG)

SEG is a global not-for-profit organization with a mission of connecting the world of applied geophysics. Founded in 1930, SEG provides information, tools, and resources vital to:



- ~ Advancing the science of exploration geophysics
- ~ Fostering common scientific interests
- ~ Supporting humanitarian efforts
- ~ Accelerating geophysical innovation



### AMERICAN GROUND WATER TRUST (Non-profit education organization)

*Groundwater Information, Awareness & Education Since 1986..... This is what we do:*



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



**WEBINAR SCHEDULE WEDNESDAY, JANUARY 12TH, 2022**

12:30pm (Eastern) 11:30am (Central) 10:30am (Mountain) 9:30am (Pacific)  
Program schedule times below are Eastern Standard Time

**START OF WEBINAR – ZOOM ACCESS CODE PROVIDED TO REGISTRANTS**

12:30 – 12:40 (Eastern time zone)

**INTRODUCTION AND WEBINAR BACKGROUND**

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

12:40 – 1:25

**GEOPHYSICAL EXPLORATION FOR REGIONAL GROUNDWATER EVALUATIONS**

Rosemary Knight, PhD, Director, GEM Center, Department of Geophysics, Stanford University, Stanford, CA

1:25 – 2:10

**GEOPHYSICAL METHODS FOR WELL SITING AND SITE CHARACTERIZATION**

- ◆ Well siting in sand and gravel and bedrock aquifers
- ◆ Environmental applications

Doug Laymon, PG, Sr. Geophysicist / Geophysical Manager, Collier Consulting, Stephenville, TX

2:10 – 2:55

**GEOPHYSICS FOR MANAGED AQUIFER RECHARGE**

- ◆ Shallow geophysical methods to locate recharge basins and map flow of recharge water

Mike Blazevic, PG, CHG, Supervising Hydrogeologist, West Yost, Davis, CA

**2:55 – 3:10 BREAK**

3:10 – 3:55 (Eastern time zone)

**GEOPHYSICS FOR AQUIFER STORAGE AND RECOVERY**

- ◆ Seismic reflection to map storage zones, confining units, and hydraulic boundaries

John Jansen, PG, PGp, PhD, Senior Geophysicist and Hydrogeologist, Collier Consulting, Stephenville, TX

3:55 – 4:40

**GEOPHYSICAL WELL LOGGING FOR GROUNDWATER STUDIES**

- ◆ Geophysical well logging for groundwater applications (lithology and water quality)

Lia Martinez, Geophysical Engineer, Mount Sopris Instrument Company, Inc., Denver, CO

4:40 – 4:50

**WEBINAR WRAP-UP - GROUNDWATER GEOPHYSICS: APPLICATIONS TO GROUNDWATER EXPLORATION AND AQUIFER CHARACTERIZATION**

Bill Alley, PhD, Science and Technology Director, National Ground Water Association, Westerville, OH

**4:50 ADJOURN**

