



# INFORMATION-EXCHANGE WORKSHOP



An American Ground Water Trust program organized in cooperation with the Arizona Hydrological Society and WITH support from the Air & Waste Management Association—Grand Canyon Section

## SOLUTIONS TO GROUNDWATER CONTAMINATION PFAS and other emerging contaminants

**Phoenix/Chandler, AZ - Thursday July 11, 2019**

**Holiday Inn Hotel & Suites Chandler, 1200 W Ocotillo Rd, Chandler, AZ 85248**

**“110 million Americans have some PFAS in their drinking water”**

(Estimate from EWG—Environmental Work Group)

**What about water supply ARIZONA and surrounding states?**

The American Ground Water Trust (AGWT) is a 501(c)(3) non-profit education organization  
See web-site for registration rates for students, members of the Arizona Hydrological Society and employees of AGWT corporate members



Arizona  
Hydrological  
Society

**This workshop program has been held in Mt Laurel, NJ, Pittsburgh, PA, Cincinnati, OH, Grand Rapids, MI and Sacramento and Montclair, CA. Additional programs are scheduled for Albuquerque, NM and at Fresno and Bakersfield in California’s Central Valley.**



AIR & WASTE MANAGEMENT  
ASSOCIATION  
SINCE 1907

### Continuing Education

The AGWT will issue Certificates of Attendance  
Approved for Water and Wastewater Operators by ADEQ – 6 PDHs



Many states are confronting contamination of groundwater and surface water from so-called emerging contaminants. There are technical, regulatory and legal challenges for communities responding to groundwater contamination. Water providers are faced with an urgent need to deal with concerns about health issues, regulations, property values, remediation options and infrastructure costs. The workshop program will provide objective information to facilitate water providers, elected officials, citizens and community leaders with policy, planning and management decisions.

Over 4,700 PFAS (per- and polyfluorinated alkyl substances) occur in the world today and many PFAS compounds transform into highly persistent perfluorinated chemicals in the environment. The compounds are connected to several cancers, liver, kidney and reproductive disorders and other health effects. Other contaminants resulting from fuel spills, manufacturing processes and improper disposal practices pose additional health risks and are reducing the inventory of economically usable groundwater.

Workshop participants will learn about the chemistry background, sampling & testing protocols, treatment technologies, cost recovery options and the characteristics of environmental persistence of contamination. Presenters will provide case studies of technical solutions for treatment and remediation. The program will also discuss regulatory and legal solutions to protecting drinking water integrity from a range of contaminants and will consider ways to find funding to pay for treatment of contaminated groundwater.



**Exhibit and sponsorship opportunities are available – [www.agwt.org/events](http://www.agwt.org/events) or call 1-800-423-7748**

**REGISTER NOW at [www.agwt.org/events](http://www.agwt.org/events) – SPACE FOR THIS TOP RATED WORKSHOP IS LIMITED.**

Join our Conference Sponsors:



**DBS&A**  
Daniel B. Stephens & Associates, Inc.



**Hydro**  
resources



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## Workshop Schedule – July 11

7:30 – 8:30 REGISTRATION

8:30 – 8:45

### THERE IS A LITTLE BIT OF SOMETHING IN EVERYTHING

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

8:45 - 9:20

### PERSPECTIVE MATTERS: PFAS OCCURRENCE, THE LEGAL LANDSCAPE, AND THE BUMPY ROAD AHEAD

Joan Card, JD, Attorney and Partner, Culp & Kelly, LLP, Boulder, CO and Phoenix, AZ

9:20 – 9:55

### EMERGING CONTAMINANTS IN ARIZONA

Mark L. Brusseau, PhD, Professor, and Sarah Van Glubt, PFAS Researcher, Department of Soil Water and Environmental Science, University of Arizona, Tucson, AZ

9:55 – 10:30

### THE TUCSON INTERNATIONAL AIRPORT AREA GROUNDWATER REMEDIATION PROJECT

Jeff Biggs, Strategic Initiatives, Tucson Water, Tucson, AZ

10:30 – 10:50 BREAK

10:50 – 11:25

### EQUIPMENT AND MEDIA SOLUTIONS FOR TCP, VOC'S, AND PFAS

Kelsey Hakes, Business Development Engineer, AqueoUS Vets, Redding, CA

11:25 – 12:00

### THE USE OF QUANTITATIVE RISK ASSESSMENT TO DETERMINE HEALTH RISKS FROM WATER CONTAMINANTS

Kelly A. Reynolds, PhD, Professor & Chair, Community, Environment and Policy, Director, Environment, Exposure Science and Risk Assessment Center (ESRAC), Zuckerman College of Public Health, University of Arizona, Tucson, AZ

12:00 – 1:00 LUNCH

1:00 – 1:35

### PFAS: WIDE-RANGING SOURCES AND IMPACTS TO WATER SUPPLIES

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

1:35 – 2:10

### SHORT & LONG CHAIN PFAS REMOVAL and ION EXCHANGE TREATMENT FOR NITRATE, CHROME VI AND URANIUM

Cathy Swanson, Groundwater Remediation Specialist, Purolite Corporation, Fullerton, CA

2:10 – 2:45

### REMOVING PFOA AND PFOS FROM DRINKING WATER: A CASE STUDY AT AN ARIZONA WELLFIELD

Dean Alford, PG, Water Resources Hydrologist, City of Tempe, Tempe, AZ and

Mark Gross, PE, VP/Project Manager, Carollo Engineers, Phoenix, AZ

2:45 – 3:20

### MOLECULAR TOOLS FOR EVALUATING IN SITU BIOREMEDIATION OF CHLORINATED SOLVENTS AND EMERGING CONTAMINANTS

Laurie LaPat-Polasko, PhD, Vice President/National Director of Remediation, Matrix New World Engineering, Southwest Groundwater, Phoenix, AZ

3:20 – 3:55

### SHIFTING CONTAMINATION COSTS FROM RATE PAYERS TO POLLUTERS

Richard Head, JD, Attorney, Of Counsel, SL Environmental Law Group PC, San Francisco, CA

3:55 – 4:10

### COMMUNICATING WATER-QUALITY SCIENCE AND "RISK" TO CITIZENS, COMMUNITIES AND DECISION-MAKERS

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

4:10 – 4:15 WRAP-UP – FINAL Q & A – CONTINUING EDUCATION SIGN-OUT



[Scroll down for registration form](#)

# Registration Form

## Phoenix/Chandler PFAS & Other Emerging Contaminants Workshop Thursday July 11, 2019

Holiday Inn Hotel & Suites Chandler, 1200 W Ocotillo Rd, Chandler, AZ 85248  
8:30am - 4:30pm

### WORKSHOP REGISTRATION: Register on-line at [www.agwt.org/events](http://www.agwt.org/events)

General Registration	\$200	<input type="checkbox"/>
AGWT Corp Member Employee	\$175	<input type="checkbox"/>
Arizona Hydrological Society Members	\$175	<input type="checkbox"/>
AWMA-Grand Canyon Sect. Members	\$175	<input type="checkbox"/>
Full-time Student (ID required)	\$ 80	<input type="checkbox"/>

PDF - Workshop presentations (Attendee price) \$ 30

Exhibit Table (registration required) \$250

**Event Sponsor:** \$1,000 and above sponsors have the option of an exhibit table  
(See website Exhibit & Sponsorship Information for more details).

\$2,000  \$1,000  \$500  \$250

(\$1K and above, please indicate if you plan to exhibit: YES  NO

**TOTAL** \$ \_\_\_\_\_

Registration includes handouts, coffee break & lunch

### Payment Information:

CHECK [payable to: AGWT]  AMEX/VISA/MC/Discover  PO # \_\_\_\_\_

AMOUNT AUTHORIZED \$ \_\_\_\_\_

Name on Card \_\_\_\_\_

Card No. \_\_\_\_\_ Expiration Date \_\_\_\_\_

Cardholder Email \_\_\_\_\_

Company Name \_\_\_\_\_

Attendee Name \_\_\_\_\_

Attendee Email \_\_\_\_\_

Position/ Job Title \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_

**REGISTER ONLINE:**  
[agwt.org/events](http://agwt.org/events)

**MAIL TO:**  
American Ground Water Trust  
50 Pleasant Street, Suite 2  
Concord, NH 03301-4073

**FAX:** (603) 228-6557

**TEL:** (603) 228-5444

**? QUESTIONS:**  
(800) 423-7748  
9:00-4:00pm (Eastern Time)

