



**NGWA**  
**Foundation**



for  
Groundwater

**2017 ANNUAL REPORT**

The Foundation mission is to conduct education, research, and other charitable activities that foster advancements in science and technology applied by the groundwater community; stimulate new knowledge, information, programs, and products; and contribute to groundwater sustainability for long-term public and environmental benefit.

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## High impact research grants awarded

Five grants totaling over \$34,000 were awarded to fund projects within the United States and globally. Here is the background on the recipients' projects:

- **Florida A&M University, \$6,000:** Their project title, "*Spatial and Temporal Microbial Community Composition, Canaries of the Aquifers,*" will work to advance groundwater knowledge with the use of next-gen DNA sequencing analysis. Through their process of examining three cave systems within the Floridian aquifer, this project will provide training for master's graduate students in water quality.
- **Can Tho University, \$4,900:** "*Enhancing groundwater resources governance in the Vietnamese Mekong Delta coastal plains under climate change impacts*" takes aim at assessing impacts of groundwater resources and governance to a coastal community, while improving strategies for sustainable groundwater development.
- **Southern Illinois University–Carbondale, \$3,979:** Due to long-term effects of contaminants found at Superfund sites across the U.S., the project, "*Remediation of 1,4-Dioxane Comingled with Chlorinated Volatile Organic Compounds by Zero-valent Iron (Fe0) Nanoparticles with or without light,*" will assess cost-effective and environmentally friendly remediation methods.
- **WATER4.org, \$11,700:** "*Low Cost Electrical Resistivity Method for Locating Water Wells*" will use funds to expand the use and research of electrical resistivity instruments, all while establishing a training procedure for users in small African villages.
- **Northern Illinois University, \$7,560:** In Myanmar (formerly Burma), there have been only two known studies of groundwater. Through funds provided to the project, "*Water Quality and Physical Hydrogeology of Mandalay, Myanmar,*" students from Northern Illinois University and the University of Mandalay will work to provide education and instruction in hydrogeology.

"The Foundation views the funding of groundwater research projects as an essential component of its mission," explains NGWA Foundation Board President, Michael Campana. "We seek to support low-cost, high impact work that also has training/experiential learning and developing-region aspects."

## Groundwater professions benefit from scholarship awards

Len Assante Scholarships are awarded to assist those studying in groundwater-related fields. An independent panel decides how to distribute the funds and the number of scholarships to be awarded from the pool of scholarship applicants. Since its inception, the fund has awarded more than \$170,000 to 115 students.

The NGWA Foundation is pleased to announce that 10 students will be receiving scholarship awards totaling \$18,000. The Len Assante Scholarship award winners for 2017 are:



**Admin Husic**  
**Past President's Award**  
 Lexington, Kentucky  
 University of Kentucky  
 \$4,000



**EliseAnne Koskelo**  
**Ora Lyons Award**  
 Alamo, California  
 Pomona College  
 \$3,000



**Aspen Anderson**  
 Golden, Colorado  
 Colorado School of Mines  
 \$2,000



**Moriah Gibson**  
 Winder, Georgia  
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 Technology  
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**Amanda Harrold**  
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**Emily Stoll**  
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 \$2,000



**Nizhoni Tallas**  
 Chinle, Arizona  
 Virginia Tech University  
 \$1,000



**Carlos Tomayo**  
 Davie, Florida  
 Florida International University  
 \$1,000

NGWA Foundation Vice President, Bev Herzog, said of the Len Assante Scholarship Awards: "NGWA members have identified a shortage of qualified applicants as one of the major challenges facing the groundwater industry. The average student with a B.S. degree now graduates with more than \$30,000 in debt.

"These costs can be a barrier to completing an education," Herzog continued. "To help alleviate that problem, the NGWA Foundation offers scholarships to encourage students to go into groundwater-related fields to provide a future workforce for our industry."

The source of funds is provided by those who have made donations to the NGWA Foundation and through an annual auction that is held at Groundwater Week.

## S.S. Papadopulos & Associates continues support of Farvolden Student Presentation Awards

S.S. Papadopulos & Associates Inc. will continue to financially support in 2018 and 2019 the NGWA Foundation Farvolden Awards. These awards are presented to undergraduate and graduate students for exceptional paper and poster presentations made during the annual NGWA Groundwater Summit.

S.S. Papadopulos & Associates Inc. was established in 1979 to provide professional groundwater and hydrogeology consulting services. With that cornerstone of expertise, we have continued to grow and have developed an internationally recognized practice in contaminant studies, environmental engineering, remediation, geochemistry, and surface-water hydrology.



S.S. PAPADOPULOS  
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## Foundation funds scholarships for 2017 Oklahoma WaTER Conference

The two Foundation scholarship recipients, Isaac Akinwumi from Nigeria and Ashutosh Kumar Mishra from India, participated in the 2017 Oklahoma University International WaTER Conference. They also participated in a post-conference workshop on well construction fundamentals instructed by NGWA Foundation Board Director and Past Foundation Board President, Steve Schneider, MGWC, and his wife, Miriam.

## A “humbling experience” says 2017 McElhiney Lecturer



Michael Schnieders, PG, 2017 William A. McElhiney Distinguished Lecturer in Water Well Technology, participated in many lectures this year, but nothing could have prepared him for the experiences he encountered. From state trade shows, to universities, to an August trip to Colombia, Schnieders could not have imagined the impact his lecture series experience would have on him.

“I thought I knew everything,” Schnieders began. “I thought I had a good understanding, but I will admit that I’ve been humbled by what I’ve learned this year. This opportunity has given me an understanding of the industry—who we are, what we must do, and how we must improve to survive and thrive.”

Schnieders says his intimate discussions with contractors, consultants, and regulators gave him insight on the challenges being faced by those in the industry.

“I’ve been amazed at what NGWA and the state associations do to keep the industry alive,” he concluded, “Truly amazed! We are all truly dependent on each other, and we must overcome the obstacles and continue to evolve to survive.”

## Water’s future focus of 2018 McElhiney Lecturer



Todd Halihan, Ph.D., P.Gp., a geology professor at Oklahoma State University and chief technical officer for Aestus LLC, has been named as the 2018 William A. McElhiney Distinguished Lecturer in Water Well Technology.

Attendees to his lecture will be offered one of two choices:

- “The Future of Water: Data or Instincts?” examines data on the hydrologic cycle suggesting that water may be being developed incorrectly ignoring complicated groundwater systems that need to be defined on the meter scale.
- “Electrical Hydrogeology: A Picture Is Worth 1,000 Wells” reveals how electrical data can allow for the determination of the location of flowpaths, find meter-scale structures that may change conceptual models, and monitor life in the subsurface as it grows.

Halihan’s professional interests center on subsurface characterization and sustainable water supply. Halihan has been an associate editor for *Groundwater*®, and currently serves on the Oklahoma governor’s Coordinating Council on Seismic Activity.

## Former McElhiney Lecturer shares experiences of the series



F. Michael Krautkramer, LHG, RG, the 2008 McElhiney Lecturer, and his wife, Annie, recently made a stop at NGWA headquarters to visit those who guided him.

“It gave me great confidence,” he says, of what he calls the best experience of his professional career. Krautkramer explained, after completing the 2008 Series, “I felt that there were no problems that couldn’t be solved. I just learned so much from site to site.”

## 2017 Darcy Lecturer describes global impact



Dr. Kamini Singha, the 2017 Henry Darcy Distinguished Lecturer, presented to thousands of groundwater students and professionals in China, Australia, Europe, South Africa, and throughout North America. She says the experience provided amazing opportunities to connect with hydrogeologists.

"The Darcy Lecture series is a really incredible way to get the name of NGWA out, both nationally and internationally," Singha says. "It's been fun to share what I know, and in return I've learned a ton as well. I couldn't have done this without the incredible support of the NGWA Foundation—both financially and logistically."

## Alpine Hydrogeology: Darcy Lecturer to explore the world's headwaters



Dr. Masaki Hayashi, professor in the Department of Geosciences at the University of Calgary, and Canada Research Chair in Physical Hydrology, has been named as the 2018 Henry Darcy Distinguished Lecturer in Groundwater Science.

Attendees to his lecture, "Alpine Hydrogeology: The Critical Role of Groundwater in Sourcing the Headwaters of the World," will explore the challenges facing hydrogeologists as they rely on creative methods to investigate groundwater sources. Alpine hydrogeology is gaining new understanding as nearly half of the world's population relies on water supplies that originate in high mountains.

Source areas of mountain streams have rugged topography with sparse soil and vegetation covers, and were once considered "Teflon basins" that have minimum capacity to store groundwater. During the past decade or so, a new understanding of alpine hydrogeology has been emerging based on detailed field observations around the world.

## NGWA Foundation thanks our distinguished lectures sponsors



Franklin Electric, the world's largest manufacturer of submersible electric motors and a leading manufacturer of pumping systems, has underwritten the William A. McElhiney Distinguished Lecture Series in Water Well Technology since 2005. Initiated in 2000, the lecture series honors William A. McElhiney, the 1948 founding president of the National Ground Water Association, and a groundwater contractor and civil engineer.

Woodard & Curran, an engineering, science, and operations firm with strong environmental roots which delivers a wide range of services to clients in many industries, has been a supporter of the Henry Darcy Distinguished Lecture Series in Groundwater Science since 2016. The series, which began in 1986, was named in honor of Henry Darcy of France for his 1856 investigations that established the physical basis upon which groundwater hydrogeology has been studied.

These series are funded through the financial support from Franklin Electric and Woodard & Curran, respectively, and are operated through the NGWA Foundation.

## NGWA Foundation launches social media outreach

The NGWA Foundation Board is excited to have launched a social media platform consisting of Facebook and Twitter! This allows for a flow of ideas and conversations, and enables us to have a better understanding of what issues matter to our membership. We encourage everyone to check out our page and join in the dialogue; provide your impressions and comments, and share among your networks. The more communication the better!

Follow the foundation at [facebook.com/NGWAFoundation](https://facebook.com/NGWAFoundation) and [twitter.com/NGWA\\_Foundation](https://twitter.com/NGWA_Foundation).



# Thank you to the individuals and companies that have supported the Foundation in the past year.

Each of these generous contributions help to enable the Foundation, a part of the National Ground Water Association, to conduct education, research, and other charitable activities to enhance the future effectiveness of the groundwater professions and to maximize the impact of groundwater for our society.

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