

**U.T. HYDROGEOLOGY NEWS – NOVEMBER, 2022**  
**HYDROGEOLOGY FIELD EXPERIENCES**



Marcus Gary's Applied Karst Hydrology Class celebrates upon reaching the confluence of Independence Creek with the Pecos River.



Some of Bayani Cardenas' Physical Hydrogeology class measuring water levels at Hornsby Bend. Bayani has also taken students for field work in the Philippines this fall.

## BLAST FROM THE PAST



Hydrogeology days 2012 at the South-Central GSA in Oklahoma. Left to right: Jack Sharp, Jona Tucker (Nature Conservancy), Marcia Schulmeister (now at Kansas University), Todd Halihan (Oklahoma State University), John Van Brahana (now emeritus, University of Arkansas), and Marcus Gary (EAA). Note that the 2023 South-Central meeting returns to Stillwater next March. See upcoming events below.

### Awards:

Nedra Bonal (PhD, 2007) of Sandia National Laboratory received the 2022 Patent Recognition Award. from the Society of Women Engineers. Nedra and her co-inventors were awarded a patent for a new imaging device created to investigate whether muons can be used to image underground structures like facilities inside mountain. Muons are particles similar to electrons but are much heavier and shorter lived. Nedra heads Sandia's Office of Research and Development Excellence.



Todd Halihan (PhD, 2000) received the C.V. Theis Award of the American Institute of Hydrology for his major contributions to groundwater hydrology. The award was presented at the AWRA/AIH meeting in Seattle. Todd is a Professor and the Sun Company Clyde Wheeler Chair in Hydrogeology at Oklahoma State University and also the Chief Technical Officer for Aestus, LLC. Todd also presented a paper at the meeting, "*Electrical Hydrogeology of NAPL Impacts: Two Decades of Surprises*" covering twenty years of using electrical hydrogeology to characterize impacted sites.



John Mather (1998 Oliver Lecturer) received the 2022 Sue Tyler Friedman Medal from the Geological Society for distinguished contributions to the history of geoscience. John is Professor Emeritus from University London's Royal Holloway College. He says. "I think the message is that... there is life after retirement." John also led the UT Hydrogeology of England field trip in 2001.



Matt Rodell (PhD, 2000) was a co-author on the paper (*An Evaluation of Remotely Sensed and In Situ Data Sufficiency for SGMA-Scale Groundwater Studies in the Central Valley, California*) that received the K.J. Lanfear Award for Outstanding Technology Paper at the recent American Water Resources Association meeting in Seattle.

### **Upcoming events:**

The **2013 GSA South-Central Section** meeting will take place on 12-14 March at the Watkins Center of Oklahoma State University (OSU). The meeting will have a diverse program of workshops, technical sessions, short courses, and field trips that covers a spectrum of geologic disciplines. Students interested in careers in geosciences will benefit greatly from the Mann and Schlemmon mentorship programs.

Note: The abstract deadline is 6 December 2022. For information, go to [https://www.geosociety.org/GSA/Events/Section\\_Meetings/GSA/Sections/sc/2023mtg/home.aspx](https://www.geosociety.org/GSA/Events/Section_Meetings/GSA/Sections/sc/2023mtg/home.aspx).

At the **Austin Geological Society's** December 5 meeting, Jack Sharp and Ron Green will present a talk, "The Edwards Aquifer", based upon their recent Groundwater Project eBook, <http://www.austingeosoc.org/new-events/2022/12/5/dec-5>.

### **Alumni and faculty news:**

Chris Ashinhurst (bs, 2004) started a new career in 2019 as a "software developer in support of the Water Resources Division of the Southern Nevada Water Authority and Las Vegas Valley Water District. I earned my second B.S in Software Development and Security in 2017 from the University of Maryland Global Campus, and a M.S. in Data Analytics in 2020 from Western Governors University. After 12 years working as a hydrogeologist at the Southern Nevada Water Authority, I felt it was time to move on and expand my horizons. I will tell you that I do miss hydro!... performing and analyzing aquifer tests in support of water rights applications in Northern Nevada and developing and testing new wells to characterized the Las Vegas Valley aquifer system were some of the most rewarding and challenging highlights of my hydro career! "

Christi Weissmantel Gell (BS, 1996) commented on the "Blast from the past" in the last Hydrogeology News.

So great to see the pic from 1996! ...when I was a freshman in high school, my geometry teacher was from Marfa and used to tell us all sorts of crazy stories about the Marfa

Mystery Lights. So, in 1996, when we were out in that area I asked every rancher we were saw about the lights and their experiences with them. When we were in Ft. Davis, I begged and pleaded for you [Prof. Sharp] to go to Marfa one night to see the lights. You said, "Well, if you can talk one of the TAs into driving you, then you can go." James [Rudnicki, MA, 1996] for whatever reason said yes. We drove out there and the whole time [he] was telling me, "You know Christi, these lights aren't real..." Well, we pulled over to the side of the road where people at the time were pulling over ... , got out, and I said, "OMG THERE THEY ARE!!" James said, "Well I'll be damned....." We stayed there for about an hour watching them and then he drove us back, the whole time saying, "I can't believe they're real!"

Dylan Hart (BS, 2017) is a Hydrogeological Engineer with Black and Veatch in Austin working in their operations group, which supporting water resources wellfield expansion, UIC well construction, and CCUS projects. He's currently helping to expand the UIC group to include site investigation and permitting services for Class VI CO<sub>2</sub> injection wells.

Evan Pearson (BS, 2010) is an Associate Attorney at Quinn Emanuel Urquhart & Sullivan. He says, "It's been a great experience."

Roman Pineda (BS, 2000) has entered the graduate school at UTSA.

Sarah Rios (BS, 2016) is with Down to Earth Cloud Solutions.

Katherine Romanak (PhD, 1997, now at BEG) gave one of the keynote addresses at the UNFCCC UN event looking at how Carbon Capture Utilization and Storage (CCUS) can enable emissions reduction and accelerate economic growth

Logan Schmidt (MS, 2022) completed his MS ("Monitoring bedrock vadose zone water storage dynamics with time-lapse borehole nuclear magnetic resonance well logging") and is now an Aquifer Data Analyst at the EAA in San Antonio.

Recently, Logan's EAA team drilled eight 30 ft boreholes in northern San Antonio (within the recharge zone) for bedrock vadose zone water storage monitoring with geophysical well logging. This is the start of a long-term research project to understand water storage dynamics in the unsaturated zone of the Edwards Aquifer region.

Alysa Suydam (MS, 2022) is the lead water and GIS consultant for Synergetic Partners, which is a green hydrogen startup.

Wendy Robertson (BS, 2006; PhD, 2014) recently published "The Hydrologic Response to a Meteotsunami in an Isolated Wetland: Beaver Island in Lake Michigan, USA" on *JGR Oceans*. The paper is the first to document the meteotsunami influence on the water levels in a dune/swale wetland complex. Wendy is an Associate Professor at Central Michigan University.

Matt Uliana (M.A., 1995; Ph.D., 2000) is with INTERA Geoscience Pty Ltd in Perth, Western Australia. Matt says, "Kelly, our cats Michael and Sparky, and I successfully relocated to WA in September of 2022. My group at INTERA are working with BHP, Rio Tinto, and our other

mining clients to ... upgrade their modeling (sorry... “modelling”) programs to include uncertainty analysis, optimization, and decision support systems ... to manage their water resources, dewatering programs, and mine closure efforts. I’m also working on enjoying the sunsets at Cottesloe Beach, sampling the best local breweries, and looking for a new heavy metal band.”

Cynthia Valle (BS, 2006) took a sabbatical last year and is now back with the US Forest Service’s International Programs. She is working on research questions commenced independently in her role as a Forest Hydrologist.

Cynthia notes that the Nez Perce-Clearwater National Forest is home to one of the oldest water gauge networks in the USA where Rosgen created the stream classification system. She “had the pleasure to gather and preserve much of this stream gauge data, but to this day, rating curves and trends have not been developed. A huge data gap to the State's (and Northwest) water network (as well as to the ongoing NEPA analyses).”

Feather Wilson (BS, 1960; MA, 1962) a geologist who lives near Tarpley in Bandera County. His 240-foot deep house well is completed in the Lower Glen Rose and produces slightly saline water (~ 1,025 ppm). Feather also measures the water level on a daily basis.

Mike Young (BEG) is on the Luminant Energy Environmental Steering Committee.

#### **Notes on newsletter distribution:**

If you have news that you would like to share, please email them to [jmsharp@jsg.utexas.edu](mailto:jmsharp@jsg.utexas.edu).

If you would like to stop receiving these newsletters, please let me know, and I will strike your name off the email lists.

If you know a friend or alum who is not receiving these, but would like to, please let me know and will shoot a copy to them.

If you have email addresses for the following, I would appreciate receiving them and then I can put these alumni back on the newsletter mailing list.

Lost alumni:

Jenna Connor	Mike Dobbins	Sarah Doyle
Tom Fenstemaker	Briana Ferrari	Patrick Fortson
Kim Gordon	Maria Herrera	Russ Johnson
Leila Mendoza	Deb Pfeiffer	Dan Renouard
Robin Sherrer		

Note: As I am now emeritus, these newsletters come out irregularly and not nearly monthly, as had been common since 1985, barring my sabbatical and research leaves. I hope to have another newsletter out in early January 2023. Please send me any news items that might be shared, especially some “blasts from the past.”