April 2019



April 11, 2019 5:30–7:30 pm (Thursday)

Red Robin Gourmet Burgers
1313 S Foothill Dr, Salt Lake City, UT 84108

This Month

Brian McInerney our state hydrologist has graciously volunteered to be our April speaker for the AEG meeting on April 11th. His talk will be "the Fate of Utah Snow in a Warming Climate." Also, he should have a pretty good handle on the potential for flooding from our heavy snowpack.

Utah's snow hydrology will be replaced with that of a rain hydrology during the meteorological winter affecting Utah's water supply with the imminent onset of a warming atmosphere. Temperatures across the region are expected to rise to 10 degrees above the current levels, and with this we can expect less frequent but more intense winter storms. Additionally, thunderstorm activity will become more severe with an increase in the amount of flash floods and urban flooding. With the onset of increased temperatures, longer and more stagnant drought conditions will influence our area, high pressure during winter, poor air quality, and an overall drying of Utah's hydrologic regime. To learn more about this topic, both spatially and temporally, come and listen to Brian's presentation.

Short Bio: – Brian McInerney has worked as a professional hydrologist for the National Weather Service for the past 28 years. He is currently involved in the science and forecasting of spring snowmelt runoff, flash flood, drought, post-wildfire debris flow forecasting, and the effects of climate change on mountain snowpack.

He holds an MS in Science from the University of Montana and an undergraduate degree



from St. Mary's University, Minnesota, and completed one year of law school at Hamline University.

Brian is currently working as part of the Earth Energy Monitoring System (E2MS) to monitor and predict Earth's energy flows. An example of this includes the ability to forecast water supply volumes from spring snowmelt runoff and improve long-range weather forecasts. Both of these proof-of-concept ideas track Earth's energy flows and attempt to recognize patterns within those flows. Once those patterns are recognized, E2MS enables an improved predictive ability.

Next Month's Speaker

John F. Wallace, P.E., D.GE

President of IGES, Inc. will be our final speaker for the season at AEG meeting on May 9th. His talk will be something like "Engineering Contributions to Enhancing/Creating Geologic Hazards". John is a geotechnical engineer and avid golfer with a high handicap. Needless to say, he chose engineering over the PGA circuit. After circumnavigating the

country in what appeared to be an endless loop spanning Buffalo (hometown) to NJ, NC, DC, WV, TX, UT, DC, NYC and TX over the course of 10 years he landed back in UT in 1986 and decided moving was overrated.

Having started his career with Dames & Moore in 1974, he interspersed stops at National Soil Services, TAMS (NYC) and EXXON. The third time with Dames and Moore (1986 to 1998) proved to be too much at which point he founded IGES, Inc. where he has hung his hat and assisted in its growth with a lot of great support from incredibly loyal partners, staff and even a few geologists.



Having seen the company grow to a staff of 45+, John has figured out a way to transition to a more relaxed lifestyle focused on more travel and recreation. Likely, he will continue to support the future growth of IGES and work as an expert witness as it is rumored

engineers never retire much to the chagrin of Cherie, his wife of 35 years.

Last Month

R. William Keach II, the new director of the Utah Geologic Survey presented: *Boom, Doom and Rocks – The Intersection of Physics, Video Games and Geology.* Recent advances in geophysics using 3D geological visualization methods that originated with the video gaming industry (eg. Mortal Kombat) has enabled more detailed interpretations of subsurface geophysical data. The Utah AEG chapter was well represented for this discussion of the fusion of geophysics and cutting-edge graphics

Call for Next Season's Speakers

The Utah AEG Chapter is active from September through May each year. As geologists, we generally take several months off during the field work season of June, July, and August. When we become active again in September and beyond we will again be looking for presentations and speakers. Our chapter includes a diverse group of professionals and students that are working on many different subjects. Please consider giving a presentation or passing along a suggestion for our next season.

AEG Student News

The U's AEG Student Chapter spent the second weekend of their spring break exploring geohazards in southern Utah. On Friday, March 15th they headed south from SLC and spent the afternoon visiting landslide-dammed valleys in Kolob Canyons Section with a tour provided by Master's candidate, Anna Stanczyk. On Saturday, March 16th the group met up with geologists Bill Lund and Tyler Knudsen of the UGS, who gave them a comprehensive tour of geohazards in Springdale, Rockville, and St. George. Finally, on Sunday the chapter stopped in Parowan Gap on the way back to SLC to view the wind gap, petroglyphs, dinosaur tracks, and faults. It was a highly successful trip! Nine students participated and the club was able to provide highly subsidized participation fees thanks to generous donations from the local AEG chapter and private donors."

The University of Utah AEG Student Chapter is an active participant in the Utah Section The Student Chapter is also looking for lecturers and field trip leaders. If interested in attending or leading a lecture or field trip, please contact Anna: a.Stanczyk@utah.edu.

The U's student chapter would like to sincerely thank this year's officers for their efforts in renewing the chapter's activity: Anna Stanczyk (President), Andrea Chica (Treasurer), Kate Nicponski (VP), and Joe Potter (Field Trip Coordinator). They would also like to welcome next year's officers for the 2019/2020 school year: Sam Lopez (President), Sarah Stropkai (VP), Clayton Russell (Treasurer), and Jenny Hambleton (Outreach Coordinator).

The University of Utah AEG Student Chapter is hosting a fundraiser at the Chipotle on 4th South on Tuesday, April 16th. This event was well attended last October and good fun!



Other News: U of U Geology Open House

<u>This Friday April 5th and Saturday 6th</u>, University of Utah Sutton Building - 115 S. 1460 E SLC. Lecture on the 5th, "We Are Earth Walking" by Dr. Gabe Bowen, Free refreshments, Field trips on Saturday April 6th, plus lots of other activities both days – see attachment at the end for details.

UGA News



Call for Papers

2020 Utah Geological Association Guidebook

"Renewable Energy and Mineral Resources Moving Towards the Future"

The Utah Geological Association (UGA) invites you to contribute a paper for its 2020 guidebook focusing on the Renewable Energy and Mineral Resources of Utah

The editors are seeking quality case studies and other pertinent research that has been completed or soon will be completed. Suggested topics include:

- New Energy Resources
- Geotechnical Foundation Designs for Wind Energy
- Geology of Gas Storage
- Geothermal Resources
- New Mineral Resources
 - Lithium
- · Cradle to Grave Designs for Mines
- The latest use of technology in mining
 - o Use of Drones
 - Slope Stability Monitoring
 - o Remote Sensing
- Mine Closures
- Reclamation of Mine sites
- Reclamation of Legacy Mine sites
- Road Log for Field Trip -Orquirrh Mtns and US-6/SR-257

Interested authors need to submit a title and a brief abstract or description (one paragraph is sufficient) to the editor by June 15, 2019. Authors will receive detailed instructions for submission of an electronic manuscript upon acceptance of the title/description. Papers are anticipated to be due near the end of 2019. Please contact the editor with any questions.

Chief Editor: Jan Morse – Division of Oil, Gas and Mining – <u>janmorse@utah.gov</u> 801-538-5327 Co-editor: Richard Giraud – Utah Geological Survey – <u>richardgiraud@utah.gov</u> 801-537-3351 Co-editor: Jon King – Utah Geological Survey – <u>jonking@utah.gov</u> 801-537-3354

Submitting Author's Contact Information, due by June 15, 2019

- Authors name(s)
 - Author affiliation(s)
- Paper title
- Brief abstract or description
- Email (primary, secondary)
- Phone (primary, secondary)
- Mailing address

Project Update - Park City Petrified Wood Geologic Park

The Park City Petrified Wood Park is approaching completion and draft panels are currently under review by UGS. These will be printed at 2x3 feet for mounting. The panel structures have been installed on site (see photo below), and petrified wood specimens have been cut and polished. The park will be completed and a ribbon cutting ceremony is anticipated this spring. The Utah Section is a contributor to the Park City Petrified Wood Geologic Park.



It's Still Time to Renew!

Please renew your memberships if you haven't yet done so. We want to thank you for your participation as a member of AEG during 2018, and we hope you will renew your AEG membership for 2019.

AEG needs your continued support in order to provide valuable geoscience publications like AEG NEWS, the Environmental & Engineering Geoscience Journal, and The AEG Insider. These publications help keep you up-to-date on the latest geoscience news and events. To continue this important work and offer other valuable benefits, we need your help through renewal of your AEG membership.

Have you already renewed your membership and you're looking for other ways to support your association? AEG's membership grows primarily through word of mouth and the excellent local and regional programs offered by AEG chapters. Please invite your coworkers and professional colleagues to a chapter event and encourage them to join you as an AEG member. To renew your membership, join AEG, or sign up a student, follow the directions on the link below:

https://www.aegweb.org/page/JoinOrRenew

News from AEG National 2019 AEG Annual Meeting

Exhibitor and Sponsorship opportunities now available

Showcase your company or organization at the 2019 AEG Annual Meeting in beautiful Asheville, North Carolina **Sept. 17-22**. Over 500 attendees are expected at this year's Annual Meeting. A wide variety of sponsorship packages and opportunities are available!



For more information and to register to sponsor or exhibit at the 2019 AEG Annual Meeting, in Asheville, North Carolina **Sept. 17-22**. Over 500 attendees are expected at this year's Annual Meeting. A wide variety of sponsorship packages and opportunities are available! For more information and to register to sponsor or exhibit at the 2019 AEG Annual Meeting, be sure to check out the Sponsor/Exhibitor-webpage[strongmail1.multiview.com]

2019 AEG Annual Meeting guest tour options

Guest Tour #1: Biltmore House and Gardens

Elegance and grandeur abound at Biltmore, America's largest home. This French Renaissance castle in the heart of Asheville and the Blue Ridge Mountains is an architectural jewel. The home features 250 rooms, including 35 bedrooms, 43 bathrooms and 65 fireplaces. In addition to the house, the 8,000-acre estate is home to forested trails and beautiful gardens, which include one of the country's most complete collections of azaleas. Biltmore is also where you'll find the nation's most-visited winery.

Biltmore is as magnificent today as it was when it was built more than a century ago. George W. Vanderbilt created the estate in the 1890s as a grand retreat in the North Carolina mountains. The estate officially opened to his friends and family on Christmas Eve 1895. Mr. Vanderbilt brought in Frederick Law Olmsted, the father of American landscape architecture, to design the gardens and trails. Biltmore was the last great project for Olmsted, whose work also includes New York's Central Park and the grounds of the U.S. Capitol. The Estate is still privately owned and operated by George Vanderbilt's descendants. Tour includes a private guided house tour, lunch and wine tasting.

Guest Tour #2: Chimney Rock and Lake Lure Boat Tour

Our tour begins with Chimney Rock State Park. Chimney Rock is more than just a walk in the woods or an awe-inspiring view. It's an unforgettable experience with one of North America's truly great natural wonders. Next, we will discover the beauty and charm of Lake Lure on a covered boat tour. Cruise along local attractions and landmarks such as those used in the filming of "Dirty Dancing." Listen to the legends of the lake and learn about the natural and cultural history of Hickory Nut Gorge, home to Lake Lure, North Carolina. Tour includes a box lunch.

Guest Tour #3: Explore the Spectacular Blue Ridge Parkway/Linville Caverns

Along the highest ridge tops of the Southern Appalachians, the Blue Ridge Parkway serves as the gateway to beautiful fall colors and breathtaking mountain vistas. We will begin the day at the Blue Ridge Parkway Visitor Center located just outside of Asheville. This environmentally designed "green" building features museum quality exhibits, a 22foot "I-Wall" interactive Parkway map, and a dramatic 25-minute movie about the Parkway and the unique culture and heritage of the Blue Ridge Parkway.

Our next stop will be the Folk-Art Center, home of the Southern Highland Craft Guild representing craft artists from the Southern Appalachia. The center houses three fine galleries and offers daily craft demonstrations. Along the way we will visit Linville Caverns to explore the amazing work of nature on the "inside" of a mountain. North Carolina's only show caverns features stalactite and stalagmite formations, an underground stream with native trout, hibernating bats, amazing mineral colors, the Bottomless Pool, and total darkness. The guided tour educates you on caverns ecosystems, geological history, and local history of the area.

Guest Tour #4: Apple Country Wine Tour

The Apple Country wine tour showcases the award-winning wines and ciders of Western North Carolina. The tour includes wine tastings, cider tasting, behind the scenes tours, and lunch. We invite you to enjoy a relaxing day exploring wineries where warm hospitality and impressive wines are the order of the day.

For more information on field course offerings please refer to the <u>Annual Meeting website[sm1.multiview.com]</u>

REGISTER NOW for the 62nd AEG Annual Meeting!

Now accepting abstracts for the 2019 AEG Annual Meeting

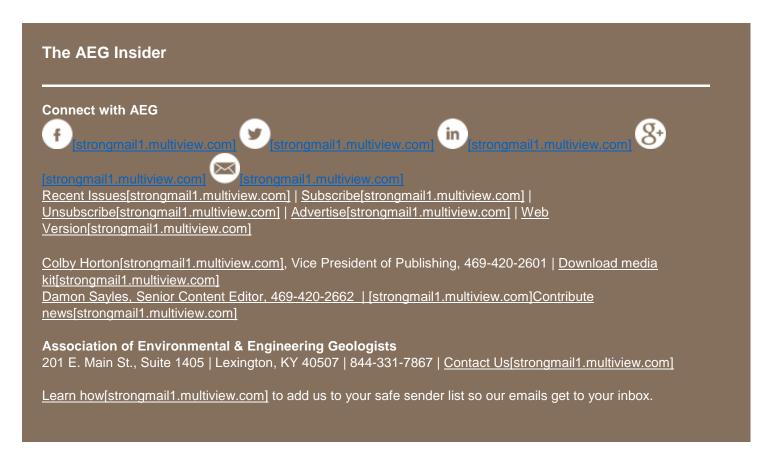
Get national attention for your project of company! The Association of Environmental & Engineering Geologists 2019 Annual Meeting invites you to submit an abstract for publication and presentation at the 67th Annual Meeting in Asheville, North Carolina.

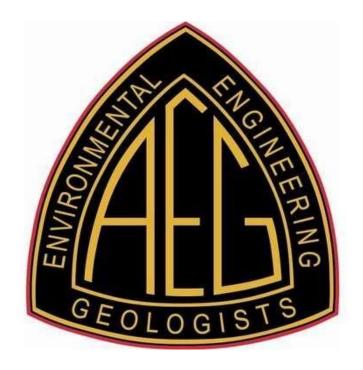
Online abstract submission is now open. The deadline to submit your abstract is May 1. For complete details about abstract submission, please visit the Annual Meeting website[strongmail1.multiview.com].

Thank you to those longstanding and new members who have signed up or renewed their AEG membership for 2019!

There is still time to renew your membership for 2019! Don't miss this opportunity to have your name listed in the 2019 Membership Directory. **To renew your membership**, visit the AEG website[strongmail1.multiview.com].

AEG National Links and Contact Info:







All-Alumni Reunion and 10-year Anniversary Frederick A. Sutton Building Celebration April 5-6, 2019

Dear Alumni, Friends, and Colleagues,

We are excited to have you join us for our 2-day celebration, which is certain to be fun for the entire family! Please RSVP to Shanna.Futral@utah.edu or 801-581-7162 so we may better plan for food and seating.

Event updates will be posted on the department website (<u>www.earth.utah.edu</u>) and Facebook (<u>University of Utah - Geology & Geophysics</u>).

Friday APRIL 5: OPEN HOUSE

6:00-9:00 pm

Over two dozen, fun, hands-on activities throughout the Sutton Building highlighting research being conducted by department faculty and students, including a scavenger hunt with prizes

7:00-8:00 pm Featured presentation: "We are Earth Walking: How chemistry links all living things to their

place & environment" by Dr. Gabe Bowen

Saturday APRIL 6: 10TH ANNIVERSARY CELEBRATION

9:00-10:00 am Continental breakfast, student research poster session, and archival displays

10:00-11:00 am Welcome presentations by Dean- Darryl Butt, Chair- Thure Cerling, and Dr. Marjorie Chan

11:00 am-1:00 pm Catered lunch, building tours, student poster session, and archival displays

Noon-5:00 pm Region Fieldtrips (see below for details)

All afternoon field trips are free. RSVP is required and spots will be filled on a first come, first serve basis. Each participant will be required to sign a waiver the day of the trip. Trips may be cancelled if insufficient registration.

* Please RSVP for fieldtrips: https://www.surveymonkey.com/r/3TWVTM9

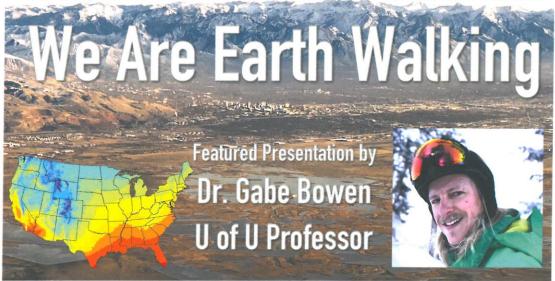
- Antelope Island Noon-5:00 pm: Visit Antelope Island State Park, with stops at the Visitor Center, and Bridger Bay. See the island's geology as well as Great Salt Lake ooids and microbialites. Meet at the FASB loading dock at noon; transportation provided.
- Natural History Museum of Utah (NHMU) 1:00-5:00 pm: Explore and go behind the scenes with a staff member. You will see many of the fantastic dinosaur finds from southern Utah. Meet at 1 pm at the NHMU front desk (ticket line) in Research Park (assume you'll have your own transportation).
- Wasatch Front 1:00-5:00 pm: Visit geologic sites along Utah's Wasatch front from Red Butte Canyon to Gilbert Park (mouth of Little Cottonwood Canyon). Learn about recent research on the quartz monzonite of the Little Cottonwood Stock. Meet at the FASB loading dock at 1pm; transportation provided.
- Lime Kiln Gulch 1:00-4:00 pm: Look for marine fossils with our micro-paleontologist, at a locality on the north side of the U campus. Meet on the south side of the Browning Building (WBB) at 1pm; transportation provided.

FREE PARKING at parking structure at 100 S. 1455 E., or at Merrill Engineering parking lot.

Join us for a night of volcanos, fossils, rock stars, & more!

GEOLOGY OPEN HOUSE

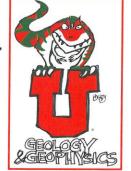
FRIDAY, APRIL 5 @ 6-9PM - FREE & OPEN TO THE PUBLIC



Sutton Building, 115 S. 1460 E, SLC UT (Limited, free parking: 100 S 1455 E)

NON-STOP FUN FOR ALL AGES

- Featured presentation on how chemistry links all living things to their place & environment, 7pm!
- See how Geologists use drones, virtual reality, 3D printing, & augmented reality!
- Delicious refreshments, 8pm! Trebuchet launching candy all night!
- Photo ops with Stomp, our dinosaur mascot!
- Over two dozen of fun, hands-on activities & games about meteorites, rocks, dinosaurs, arches, earthquakes, volcanoes, fossils, snow melt, etc.!
- Win lots of cool geology-themed prizes!
- Bring your rocks to get identified by an expert!
- Tour our amazing collection of rocks, minerals, fossils gems, & meteorites!
- Buy inexpensive & beautiful geological maps, rocks, t-shirts, & toys!





Keep up to date about all the exciting "University of Utah Geology and Geophysics" events and news.