



AGS Newsletter

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Results of the Arizona Geological Society Spring Survey 2023

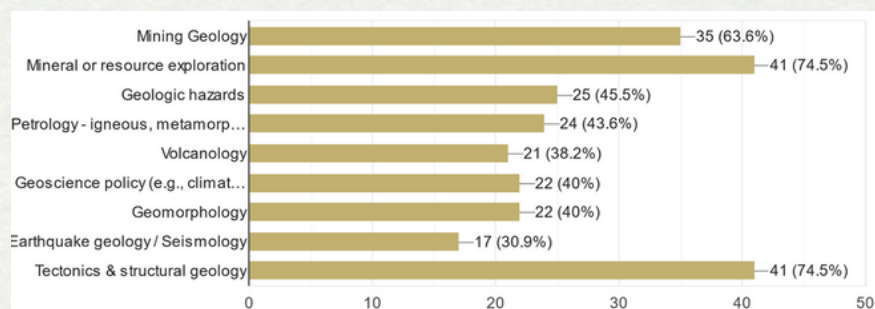
In this edition:

- Results of Spring Survey
- AGS Fall-2023 schedule (social mixers, field trips, presentations)
- AZGS Update by Phil Pearthree
- Brief review of Pima County Mineral Districts by Rasmussen & Keith
- Remembering Diana Kamilli
- All AGS Survey Member Comments

Fifty-five AGS members responded to the Google Forms 2023 Spring Survey. The survey was open through May 2023 and included 5 closed questions and 1 open question for member comments. Each question and member responses follow; more than 30 members addressed comments to the AGS EX COM. It's clear from the responses that members greatest interests are in mining geology and mineral exploration; scheduling monthly presentation at a central Tucson location; live streaming presentations is greatly appreciated; and members would like to return to two field trips annually and strive to host an occasional meeting in the Phoenix area. (For the full range of responses to the open-ended question, see the final page of this newsletter.)

Question 1: How often would you like to attend an in-person AGS meeting? Select from monthly, bi-monthly, or quarterly. Responses. Monthly was the overwhelming favorite with 31 of the 53 responses (58%). Quarterly garnered 16 responses (30%), bimonthly 6 responses (12%).

Question 2: What types of presentations interest you? From the 55 responses, the top three topics selected were: Mineral or resource exploration (74.5%); Tectonics and structural geology (74.5%), and Mining Geology (63.6%). Presentations with the lowest approval are Earthquake geology/seismology (30.9%); and Volcanology (38.2%)

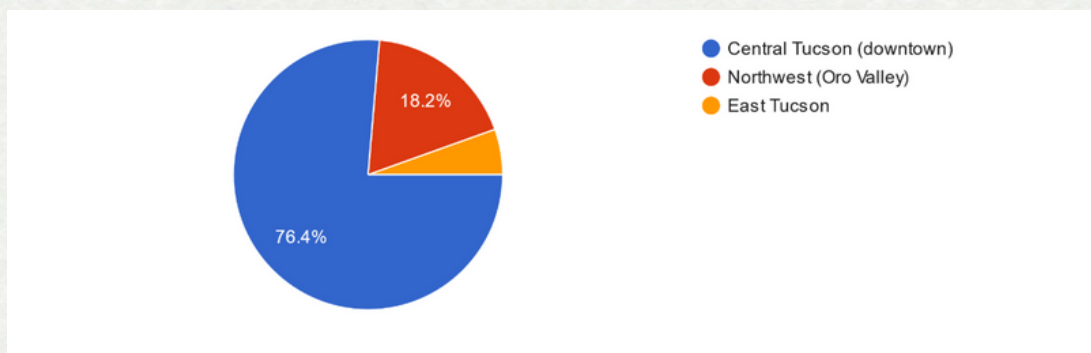




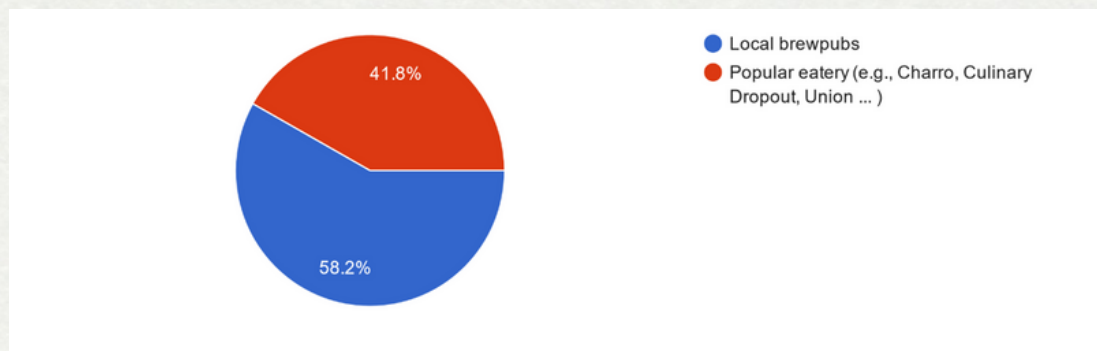
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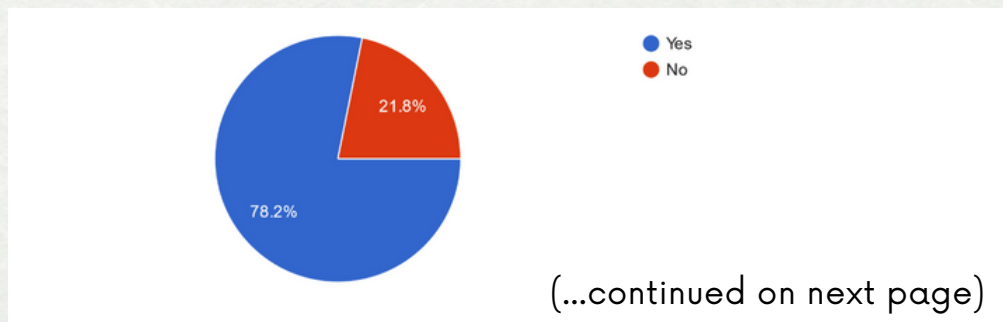
Question 3: Would you prefer a centralized meeting location? Just over 76% of participants selected central Tucson (downtown) as their preferred central location. Oro Valley came in at ~ 18 percent, and East Tucson at about 5%. Clearly, central Tucson is preferable to the 55 people who completed the survey.



Question 4: Would you attend if the location was centralized but the venue varied? The chart shows a preference for local brewpubs over eateries. Note – The availability of Hexagon conference center in downtown Tucson for AGS presentations somewhat negates this question. The Borderlands Brewery at 119 E Toole Avenue has proved a popular site for hosting AGS social events. Unfortunately, the absence of dedicated indoor space prohibits slide presentations. There does appear to be some interest in hosting meetings at local eateries.



Question 5: Are you interested in streaming online presentations? At ~78%, AGS members overwhelmingly support broadcasting AGS presentations. The comment section below includes several supporting statements. Importantly, broadcasting presentations provide the opportunity to record and share the presentation with those who could not attend or stream the original broadcast.



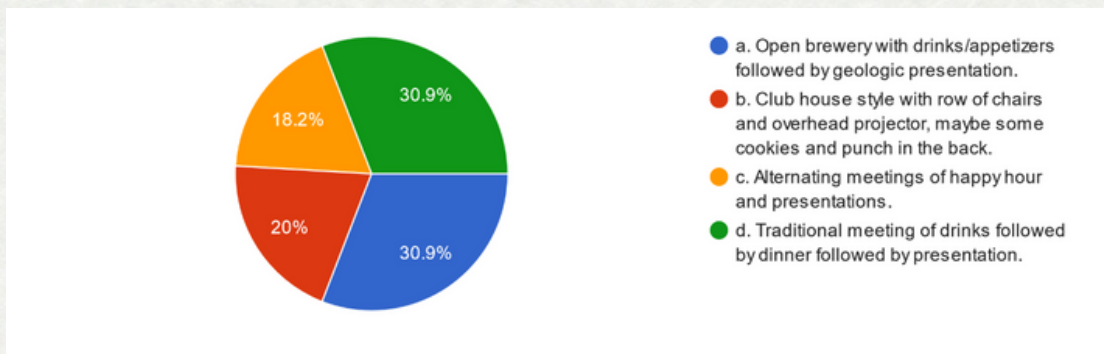
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Question 6: What is your preferred venue for in-person AGS presentations / meetings?
This question is redundant, but does show a preference for either brewpub or traditional meeting with dinner.



Question 7: What member services should AGS Executive Committee emphasize or develop to add value to the Society? Please share your thoughts and ideas. The objective of this open ended question was to elicit member comments on improving AGS services. The responses while diverse included some common themes, bulleted below. All responses are reported in Table 1 at the end of the newsletter.

- Return to two field trips annually.
- Explore options to better engage our members in Phoenix (e.g., AGS Phoenix presentation) and Flagstaff.
- Continue to broadcast live presentations on the web. (Noted in four individual responses.)
- Draw on the expertise of members to build a modest geoscience outreach program.

AGS Events Calendar, Fall 2023

Aug 24th	Borderlands Social Mixer
Sep 7th	(Speaker) Dr. Virginia McLemore (NM Bur. Geology & Mineral Resources)
Sep 29th	South 32 Hermosa Zn-Pb-Mn-Ag Field Trip, Patagonia Mountains
Oct 3rd	(Speaker) Dr. Amanda Hughes (UArizona)
Nov 7th	(Speaker) Dr. Jon Spencer (AZGS / UArizona)
Dec 5th	(Speaker) Dr. Shelby Rader (Indiana University)

Regarding the field trip to the Patagonia Mountains, southeast Arizona. Geoscientists from South 32 will host the trip and provide guidebooks. The trip is scheduled for Friday, 29 Sept. South 32 requests that we limit the trip to 25 AGS members.



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AZ Geological Survey Director Phil Pearthree on Current Activities at the Arizona Geological Survey - Select Highlights

Geologic Mapping: More federal funding is available than ever before through the STATEMAP Program and our commitment of state funds to support mapping is also unprecedented. We have prioritized 1:24,000-scale mapping in west-central Arizona for the past several years, and in 2023 released 3 geologic maps covering southern Big Sandy Valley; three more maps covering northern Big Sandy Valley will be released later this year. This past year we began a 2-year detailed mapping effort in the Duncan area of southeastern Arizona. A parallel track of development of digital 1:100,000-scale geologic maps covering a swath from west of Phoenix through the Tucson metropolitan area is underway. Two maps were released in 2023 and several more are in review or underway.

Data Preservation: We are engaged in a major effort to digitize and re-release legacy geologic maps produced by AZGS geologists in the 1980s and 1990s, when a tremendous amount of important geologic mapping was done. Previously these maps have only been available as static digital files (PDFs); they will now be available as Digital Geologic Maps (DGM Series) with new layouts and geodatabases conforming with current mapping standards.

Mineral Resources: We just completed an ambitious geologic mapping project in the Kaiser Springs area of west-central Arizona that was funded by the USGS Earth Mapping Resources Initiative (MRI). The purpose of this work was to characterize the geologic framework associated with lithium-bearing sediments in that area. The map and report will be released later this year. We have begun another Earth MRI-funded project to investigate the geochemistry of Laramide porphyry deposits in cooperation with the New Mexico Bureau of Geology and Mineral Resources.

Landslides: We have multiple active research projects focused on understanding precipitation thresholds for triggering debris flows in burned watersheds, estimating sizes of post-wildfire debris flows and their runout areas, and monitoring the effectiveness of various post-fire mitigation efforts in Arizona. We are continuing our landslide mapping efforts along major highways through the Transition Zone. Our current mapping project covers State Routes 87 and 260 from Mesa to the Mogollon Rim. Most of the funding for these efforts comes from FEMA via the Arizona Department of Emergency and Military Affairs.

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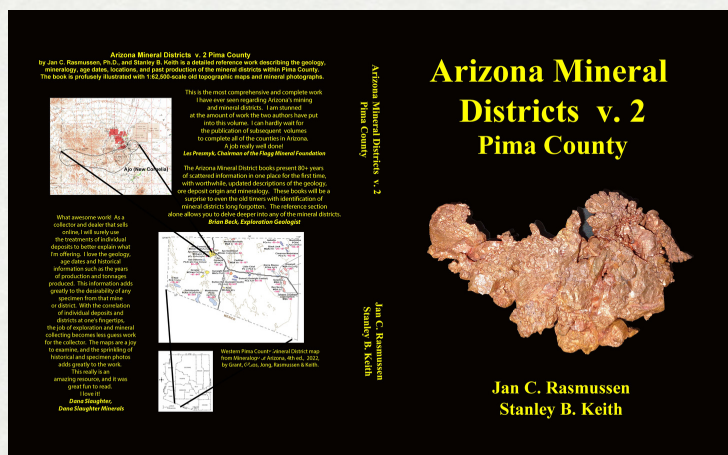
Subsurface geology/ sequestration efforts: The AZGS is engaged in several partnerships to explore possibilities for geologic sequestration of CO₂ in Arizona. The Carbon Utilization and Storage Project (CUSP) West involves 11 western states and 4 national laboratories in efforts to capture and securely store anthropogenic CO₂, with major funding from the US Department of Energy. In Arizona we are focused on better understanding subsurface geology in west-central and northeastern Arizona for potential sequestration of CO₂ deep underground. We have just begun a project to explore potential sequestration of CO₂ via reaction with mafic volcanic rocks in cooperation with Arizona State University and Northern Arizona University.

Water resources: Mapping the extent of Holocene floodplain deposits along perennial streams is an important component of the process of delineating subflow zones associated with those streams. We have worked with the Arizona Department of Water Resources to systematically map these deposits since the late 2000s and are currently working on the western part of the Little Colorado River watershed in northern Arizona.

Earthquake hazards: AZGS maintains and operates 15 broadband seismic stations distributed across the state. We are collaborating with the Bureau of Reclamation to investigate several Quaternary faults in central Arizona and are developing a virtual Arizona Earthquake Clearinghouse to deploy in the event of a damaging earthquake in or near Arizona with funding from FEMA.

Arizona Mineral Districts V2 Pima County Now Available

Jan Rasmussen and Stan Keith have released Arizona Mineral Districts v. 2 Pima County. Volume 1 focused on the mineral districts of Cochise and Santa Cruz Counties in southeast Arizona. These reference works describe the geology, mineralogy, geochronology, locations, and past production of the mineral districts within Pima County. The book is profusely illustrated with 1:62,500-scale old topographic maps and mineral photographs. The mineral districts books are available at Amazon; hardcover (\$50.37), softcover (\$38.74). Note: Arizona Mineral Districts V.3, La Paz and Yuma Counties will be released in several weeks.





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Remembering Diana Kamilli: Ph.D., Scientist and Educator 1941-2023

Diana Kamilli, longtime member of the Arizona Geological Society, passed away on 2 August 2023 after a brief illness. She was 81 years old. She earned her Ph.D. from Rutgers University in 1968. Diana served for six years as Chair of the Geology Dept. at Wellesley College in Wellesley, MA. Her interest shifted to archaeological geology and Diane operated a successful consulting business. Science ran an article in 1993, "A Thoroughly Modern Marriage" by Ann Gibbons recounting the personal and professional lives of Diana and her husband, Robert (Bob) Kamilli. Diana served as an AGS Councilor from 2009-2011. Bob Kamilli, US Geological Survey retired, served as an AGS officer for nearly 20 years.

Memorial Service for Diana Kamilli will be held from 9:30 a.m. to 11:45 a.m. Friday, 20 Oct. at St. Philip's in the Hills Episcopal Church, 4440 N. Campbell, Tucson. Cori Hoag will be playing the flute. Reception with food and drink to follow at St. Philip's. Bob Kamilli is graciously inviting all AGS members to attend.

On behalf of AGS Executive Committee and AGS members present and past, we offer our heartfelt condolences to Bob, and to their children Robert Chapman Kamilli and Ann Chapman Kamilli.



Diana's obituary:

<https://bringfuneralhome.com/tribute/details/321859/Diana-Kamilli/obituary.html>

"A Thoroughly Modern Marriage"
Science, 1993:

<https://www.science.org/doi/10.1126/science.260.5106.411>



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AGS Survey: All Member Comments (unedited)

- Perhaps add a job board.
- 2 field trips/year (this was normal until the last few years)
- Maybe an annual get together like the SME picnic at San Xavier
- Having meetings (or at least the presentation) starting 30 mn later would make a world of difference for the folks getting off at 5pm. I'm in the society to grab a beer with fellow AZ geologists and talk about rocks/hear what people are working on/researching. Maybe we can do quick self introductions (name/area of work/interest/ect) at the meetings so we can help introduce new people to the members (and learn what everyones area of interest/expertice is).
- I am an economic geologist resident in Flagstaff. I value the AGS meetings now available on zoom, but regret no local professional organization. There are many geologists in Flagstaff, but we are not connected. I suggest that AGS consider local chapters like Geological Society of Nevada has. There are plenty enough geologists is greater Phoenix and in Flagstaff to expand the reach of AGS beyond Tucson.
- I feel the mix of meeting presentations over the past few years have been of interest to me.
- Early career advisement and placement.
- More field trips.
- I am interested in advertising in your newsletter, and I may also be interested in sponsoring a talk/meeting, please follow up with me ...
- Field trips, enjoy in-person meetings, newsletter members spotlight similar to gsn newsletter so we get to know members. If meeting/presentation at brewpub or eatery only concern if being able to hear and see presentation, open on venue and location. I'm not the biggest fan of hexagon but fits of its free.Also not sure if zoom is still necessary, better to not aloffer and have people show up. Ex committee board is too large (bylaws for different era) and should be streamlined to keep interest.
- Unfortunately I do not live in Tucson anymore, when I was there I enjoyed the traditional Meeting format, I did enjoy the field trips.
- Links to other geoscience venues, U of A Geological Engineering, for example.
- A society like AGS can draw on the expertise of its membership to provide unbiased information to the community (and the AGS membership) on issues that impact everyone and required understanding of regional geology to make decisions-- things like sustainable mineral resource development, ground water supply, waste management, energy storage, CO2 sequestration.
- "Thanks, Mike!

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