

UGS BOARD MEETING
Department of Natural Resources
Utah Geological Survey
1594 West North Temple, Suite 3110, Salt Lake City
Wednesday, January 20, 2021

The meeting of the UGS Board was called to order at 8:37 a.m.

ATTENDANCE

Board members: Elissa Richards – Chair, Marc Eckels, Ken Fleck – Vice-Chair, Rick Chesnut, and Pete Kilbourne. Sam Quigley, David Garbrecht, and Tom Faddies were not in attendance.

UGS Staff: Bill Keach, Mike Hylland, Cheryl Gustin, Michael Vanden Berg, Steve Bowman, Grant Willis, Jay Hill, Chris Arner, Eugene Szymanski, Kathryn Ladig, Hugh Hurlow, Diane Menuz, Paul Inkenbrandt, and Rebecca Lee. Jodi Patterson joined mid-meeting.

APPROVAL OF MINUTES

Elissa Richards motioned to approve the minutes of the October 14, 2020, UGS Board meeting. Pete Kilbourne seconded the motion. The Board voted, and the motion carried.

ACTION ITEM

Although contract proposals for external funding are provisionally approved by the Board by email, they require formal approval at the next Board meeting. The proposals are:

Water Budget for Emery Valley, Southern Johns Valley, and Bryce Canyon City, Garfield County, Utah; funding from the DNR – Division of Water Rights; new funding to the UGS \$117,500; total project funding \$235,000; estimated start date 2/1/2021; estimated end date 12/31/2022.

Ground-Based Measurement of Evapotranspiration in Utah, funding from the DNR – Division of Water Rights; new funding to the UGS \$41,000; total project funding \$54,667; estimated start date 12/4/2020; estimated end date 6/30/2021.

Utah FY21 STATEMAP; funding from the USGS; new funding to the UGS \$800,000; total project funding \$1,600,000; estimated start date 7/1/2021; estimated end date 6/30/2022.

Evapotranspiration measurement for water banking near Price, Utah; funding from the Central Utah Water Conservancy District; new funding to the UGS \$23,110; total project funding \$46,219; estimated start date 1/1/2021; estimated end date 6/30/2021.

Transforming Uinta Basin Earth Resources into Products (CORE-CM); funding from DOE-NETL via University of Utah, Department of Mining Engineering; new funding to the UGS \$60,000; total project funding \$75,000; estimated start date 10/1/2021; estimated end date 5/31/2023.

FORGE phase 3B; funding from the University of Utah – EGI; new funding to the UGS \$120,238; total project funding \$120,238; estimated start date 11/1/2020; estimated end date 9/30/2021.

FY2021 Geologic Data Preservation Project; funding from the USGS; new funding to the UGS \$77,052; total project funding \$154,185; estimated start date 7/1/2021; estimated end date 6/30/2022.

Expenditure of approximately \$23,000 from the Sample Library Fund to add shelving and update lighting in the Utah Core Research Center.

Elissa Richards motioned to formally approve the above proposals. Marc Eckels seconded the motion. The Board voted, and the motion carried.

DIRECTOR'S REPORT:

COVID-19 update –

COVID-19 continues to impact UGS staff, the majority of whom continue to work from home. For the most part, fieldwork has also resumed with an increased focus on personal safety. Partnering agencies have also implemented their own safety protocols which require additional coordination efforts. The State of Utah has set forth several guidelines which are closely followed by management and staff.

Working from home does not seem to be having a significant adverse effect on staff productivity. The Survey uses a set of metrics to track work product output. Those metrics include, among other items: maps published, reports written, letters sent and, presentations given. Those metrics show little drop off across the Survey.

Personnel Changes –

Volunteer Intern:

Chris Arner – Hazards

New hires:

Eugene Szymanski – Senior Geologist, Energy and Minerals

Kathryn Ladig – Hydrogeologist, Groundwater and Wetlands

Promotion:

Rebecca Lee – promoted from Intern to GIS Analyst (TL)

Retirement:

None known at this time. Potential for 2 to 3 next year.

Personnel Promotions –

Over the past several years financial constraints have limited the number of promotions and raises the UGS was able to give to staff. The retirement of some senior staff along with new ongoing funds from the legislature allowed us to give promotions to a number of UGS personnel. Many of these were long overdue, and we were excited to make it happen. The following is a list of staff receiving promotions in FY21.

<u>Who</u>	<u>Promoted to</u>
Don Clark	Senior Scientist
Jim Kirkland	Senior Scientist
Janae Wallace	Senior Scientist
Jessica Castleton	Senior Geologist
Adam McKean	Senior Geologist
Greg McDonald	Senior Geologist
Mark Milligan	Senior Geologist
Marshall Robinson	Senior Geologist
Zach Anderson	Project Geologist
Ryan Gall	Project Geologist
Adam Hiscock	Project Geologist
Lance Weaver	Web Content Editor II

Additionally, raises were given to another 14 staff members.

Recognition –

*UGS Employee of the Year, 2020 – **Starr Soliz**, Executive Secretary.* Nominations are put forth by employees. A committee of employees selects from the nominations. This year a record 11 employees were nominated. Even with the large number of nominations, Starr alone received six nominations. She was a unanimous selection by the committee. Below is a summary of her nominations.

“Congratulations to Starr Soliz who was selected by her peers as the 2020 UGS Employee of the Year. Starr has been with the UGS since 2005; she is currently an Executive Secretary, providing secretarial support for the Geologic Mapping and Groundwater programs and administrative support for the UGS as a whole. She also serves as the front desk representative, greeting all who contact the survey with a smile and kind voice. She consistently goes above and beyond her numerous duties and no task is ever too big or too small. During this unprecedented and difficult year, she was reliably in the office and kept the UGS running efficiently during the pandemic, allowing staff members to work remotely while maintaining a constant connection to the office. Whether we had issues with setting up our home offices or needed supplies, Starr was there to track down whatever we needed, keeping us safe and healthy and making our jobs and lives easier, and she has done it with strength, courage, and professionalism. Starr exceeds all expectations and has an incredible work ethic. She is a responsible, dependable, and giving co-worker. Starr is an outstanding employee and deserving recipient of this special award and recognition.”

Stephanie Mills – Senior Geologist in the Energy and Minerals Program, passed the ASBOG test and is now officially a Utah Licensed Professional Geologist.

Lehi Hintze Award – Announced October 19th. David Simon, an independent consultant was selected by the committee.

The UGS is a co-sponsor with the UGA of this award, given “*annually to one person considered by the selection panel to be the most deserving candidate. This person can be from academia, government, the private sector or the general public. The criteria for “Outstanding Contributions to the Geology of Utah” is intended to be interpreted broadly and to include all areas of the geosciences.*”

Recent activities – Looking forward

Energy and Minerals –

Steptoe Valley geothermal project (DOE-funded) has started, staff have begun collecting gravity data. Additional field work is waiting on approval from BLM to access certain lands. All field work will need to stop in late February through the spring due to sage grouse lekking season.

Drilling of the Cane Creek well commenced in mid-December and reached core point at 9600 ft on January 6. We recovered 110 ft of core, the entire Cane Creek, plus salt and clastic 23 below Cane Creek. Logging will take place on January 12-13, including the collection of ~20 rotary sidewall cores.

The minerals group continues to work on several critical mineral related projects such as mapping at Gold Hill, vanadium exploration in SE Utah, and uranium data preservation activities.

The mirabilite mounds returned to the shores of the Great Salt Lake this year. Staff conducted research on the formations, collecting temperature data, conductivity, and time lapse photos. We believe we now have a good handle on conditions of formation and have begun drafting a paper that we hope to submit to *Geology*.

Geologic Hazards –

The UGS Geologic Hazards Program recently completed a second edition of the geologic hazard investigation guidelines (<https://ugspub.nr.utah.gov/publications/circular/c-128.pdf>), used by local governments in their geologic hazard ordinances. The second edition includes a new radon gas hazard guideline and a Utah Geologic Hazard Model Ordinance that local governments can easily use in their own ordinances, along with minor updates.

Surface fault trace mapping and delineation of special study areas for faults in Cache Valley, the Bear Lake area, Tooele Valley, and Rush Valley, and for the Hurricane, Sevier, and Washington fault zones, are ongoing. Mapping is performed at a scale of 1:10,000, using available high-resolution lidar elevation data, aerial photography, and other data, along with field reconnaissance. Mapping is added to the *Utah Geologic Hazards Portal* (<https://geology.utah.gov/apps/hazards/>) as it becomes approved.

Groundwater & Wetlands–

Diane Menuz and the Wetlands Section were awarded three EPA Wetland Program Development Grants that will fund most of the section through 2023. The total grant amount is

\$963,303 and the total outside funding is \$722,477. Diane will briefly describe the projects in a presentation at the end of the meeting.

The Groundwater Section has begun its study of “Ground-Based Measurements of Evapotranspiration” in cooperation with the Division of Water Rights and added the Central Utah Water Conservancy District as a cooperator/funder to the project.

Mapping & Paleontology – Mapping

The Mapping Section completed FY20 STATEMAP deliverables in September 2020 and submitted them to the USGS. We are now working to open-file them. At about the same time, the Program dove into work on the biggest STATEMAP grant we have ever had—more than triple the previous year. Due to greatly increased legislative funding of the National Cooperative Geologic Mapping Program, the UGS was awarded \$458,577 in the annual STATEMAP grant and \$92,681 in a separate cooperative agreement funded at 100%, for a total workload of \$1,009,835. Because of the size of these awards we necessarily had to bring in workers from other UGS programs. We are now struggling to complete all these projects and spend out the funds (too many non-grant-funded demands on people’s time).

The new funding comes with new requirements. One major requirement is to produce our geologic maps in a new national map schema called GeMS (geologic map schema). In order to meet that requirement, we reclassified Doug Sprinkel’s retirement position into a GIS Analyst specializing in GeMS. Rosemary Fasselin came on board in July and has done an excellent job preparing all UGS GIS staff for this transition, with several training sessions planned over the next couple of months.

In the fall we also wrote our next proposal for increased STATEMAP funding for work to be completed in FY22. The proposal requested \$765,873 for \$1,531,746 in projects. This amount is mind-boggling and would be very difficult to complete (though we have a plan to do it if we are granted the entire amount). However, we anticipate getting 60-70% of the requested amount, which will be a much more manageable workload. We should learn the results in March at which time we will revise projects and deliverables.

Paleontology

The Paleontology Section completed two field fossil inventory projects in summer and fall. One was in the Dome Plateau east of Arches National Park under a 50:50 agreement with the BLM who wanted a fossil assessment in an area receiving greatly increased ATV traffic. The other was in a 50:50 agreement with the National Park Service in the White Rim Trail area of Canyonlands National Park. Both were very successful though neither found fossils of extraordinary significance, and both should lead to additional contracts next year.

The *Utahraptor* megablock move in February was timely. Fortunately, the move was completed just before sending staff to work from home due to COVID-19, providing an isolated place where our chief preparator, who has high risk factors, can work in isolation. He has now exposed some exceptionally well-preserved parts of upwards of a dozen juvenile *Utahraptors*.

We were able to find a state agency, the Utah STEM Foundation, who can receive non-profit donations to help us fund our non-UGS preparator (the UGS does not have funds to pay their salary). Fund-raising has been successful, but slow, and we need to find more donors (if anyone has any ideas, we would love to hear about them).

Geologic Information & Outreach –

Due to COVID-19 we were unable to host an in-person Earth Science Week in the fall. Instead, we created a new Earth Science Week web page (<https://geology.utah.gov/2020-earth-science-week/>), and our new Rock Talk video series is now online (<https://geology.utah.gov/popular/multimedia/>). We have also used the hiatus for planning new material. In addition to the web page and videos (more are in progress), GIO is working on updated in-person activities for 2021. These may include a giant geologic time scale that kids can walk along to the back of the UCRC and interactive earthquake activities such as a liquefaction shake table, giant fault blocks, and a seismograph to record kid-induced "earthquakes."

UGS web services group has:

- Upgraded the Groundwater and Wetlands section of the website
- Completed the FORGE app
- Created a new interactive publication list for geologic maps.

2020 UGS Website Highlights:

- 2020 had over 250,000 more user sessions than 2019.
- 2020 had appx. 28,000 more downloads than 2019.
- "Ice Ages: What are they and what causes them?" is still our most popular page with almost exactly consistent pageviews from 2019 to 2020.
- Earthquake- and fault-related pages had tens of thousands more pageviews than in 2019.
- All of the top 10 publication downloads were earthquake-related in 2020.

The bookstore continues to be open for walk-in business from 10-5. Masks are required and social distancing is prioritized. The 2021 Calendar of Utah Geology is now available for purchase in our bookstore.

The UGS library has been and continues to be open by appointment only due to COVID-19. We have continued to serve patrons, mostly with digital versions of our publications. Similar to our main website traffic, earthquake and fault-related publications were accessed often, as were geologic maps. However, library patrons use more technical publications as compared to our main website traffic.

Funding and budget –

The State of Utah weathered well the economic challenges related to the COVID-19 pandemic. The economic challenges of the past year underscore the need for the UGS to obtain stable resources to ensure the UGS can continue providing critical services to the State of Utah. The budget for FY21 though tight is manageable. Mineral Lease royalties, after a precipitous drop in mid-2020, have recovered faster than anticipated. Significant increases in outside funding, mostly from federal agencies, will help us this year. STATEMAP, from the USGS, has

provided an influx of new money. Of course, the influx requires added match to receive the grant. Utilizing the full grant, \$551,258 will be a challenge.

UGS leadership continues to believe that Mineral Lease funds are not a sustainable, reliable funding source for core operating expenses. To that end the UGS has sought the stability of state General Funds to maintain core services and seeks to use Mineral Lease funds as a mechanism to balance fluctuations in outside funding, while still maintaining the mineral-related objectives tied to Mineral Lease funds. Currently, we anticipate another significant drop, from our pre-COVID-19 forecast of \$1.1 million to possibly \$750,000.

At the UGS we are actively pursuing other funding options to maintain services to the State at current levels. Options discussed in our October 2020 Board meeting:

- 1) Working with industry associations to ask the legislature to earmark certain tax revenues for use by UGS.
- 2) Asking for additional increases in both ongoing and one-time allocations from General Funds.

Updates to the options discussed in October –

Option 1: Senator Hinkins is working on a bill to create new restricted accounts, one of which will be for the UGS. This account would be funded by a percent of oil, gas and mining Severance Taxes. (See Legislative Update for more details.)

Option 2: The UGS proposed a new building block of \$250,000 in the form of *Ongoing* funds. The Governor's recently released budget for FY22 has included our request, split into two parts: \$125,000 of *Ongoing* and \$125,000 of *One-time*.

UGS leadership will continue to support and pursue options that will require longer term efforts.

Equipment purchases and facility upgrades –

For FY21 we requested \$200,000 of One-time funds to be used for maintenance catch-up and replacement of aging or non-functional equipment. Additionally, we requested the Board's approval to expend approximately \$23,000 from the Sample Library account for shelves and lighting updates. The shelving will span the center aisles and increase storage space by 20-30%.

To date we have approved the expenditure of another \$168,045 for a wide range of new items and maintenance.

Financial Update –

Financial documents in the Board packet include the November FY21 Budget-Actual-Forecast Summary and the contracts tracking summary. There are eight new grant proposals that require formal board approval.

The forecast for FY21 as of November is a surplus of \$659,500. FY21 is looking strong due to the higher than usual outside grant funding, currently forecasted at \$2.64 million. This may prove hard to attain and will have staff working hard to meet deliverables. After the December financials are complete, we will do our deep mid-year review of project status. I anticipate we

may need to scale back the revenue estimate by \$300,000. We have also increased our estimate of Mineral Lease funds from \$450,000 to \$750,000. As mentioned last meeting, we have been able to approve many overdue staff salary increases and promotions and equipment purchases this year.

The FY22 Budget Request submitted was estimated to be similar to fiscal year FY21. We still anticipate Mineral Lease revenue to be about the same and outside grant funding to be strong again. In the Governor's budget release, he has recommended our building block of \$250,000 General Funds; however, it has been split \$125,000 one-time and \$125,000 on-going.

Legislative Update –

For the 2021 General Legislative Session, we are presently tracking two bills that could entail involvement by or impact to the UGS. House Bill 45, Radon Task Force (Rep. Keven Stratton), creates the Radon Task Force, provides for appointment of members, and requires the task force to recommend ways to increase public awareness about risks of radon and ways to mitigate Utah resident's exposure to radon. Task force membership as indicated in the draft legislation does not include the Department of Natural Resources. We've reached out to Rep. Stratton to highlight how the UGS could contribute to the efforts of the task force, either as a task force member or through providing input during the task force's deliberations. Rep. Stratton seems to be receptive to UGS involvement, and we will continue to be in communication with Rep. Stratton on the subject during the General Session.

The other bill is a Senate Bill that has not yet been numbered. This bill, Severance Tax Revenue Amendments (Sen. David Hinkins), creates four new Oil, Gas, and Mining Restricted Accounts (including one designated for the UGS) and establishes deposits of certain portions of severance tax revenue to the restricted accounts. The draft bill specifies that, after distributions to the Ute Tribe and Navajo Nation, that severance tax revenue would be deposited into a new Utah Geological Survey Oil, Gas, and Mining Restricted Account as follows: (i) 2.5% of the first \$50 million of the average aggregate annual revenue, (ii) 1% of the next \$50 million of the average aggregate annual revenue, and (iii) 0.5% of the average aggregate annual revenue that exceeds \$100 million. We are actively working with Sen. Hinkins on crafting the draft bill language.

Miscellaneous Information Item –

We received notification that the Administrative Rule (R638-1) - Acceptance and Maintenance of Confidential Information is set to expire in 30 days. It affects the UGS, the Director, and the Board. Every five years we have the opportunity to renew with no changes (as we've done in the past), initiate a process to modify if we think anything should be changed, or let the rule expire if we thought it was no longer needed. We will reapply for this extension with some wording changes.

Staff Presentations –

Hugh Hurlow and Diane Menuz presented an update on the Groundwater and Wetlands Program.

Paul Inkenbrandt presented a project summary on "Ground-Based Measurement of Evapotranspiration in Utah."

Michael Vanden Berg gave an update of the Cane Creek drilling project.

Board meeting was adjourned at 11:20 a.m.