

UGS BOARD MEETING
Department of Natural Resources
Utah Geological Survey
1594 West North Temple, Suite 3110, Salt Lake City
Wednesday, October 14, 2020

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, Dave Garbrecht, Rick Chesnut, Sam Quigley, and Pete Kilbourne. Tom Faddies was not in attendance.

UGS Staff: Bill Keach, Mike Hylland, Cheryl Gustin, Michael Vanden Berg, Mark Milligan, and Jay Hill. Jodi Patterson was not in attendance

APPROVAL OF MINUTES

Sam Quigley motioned to approve the minutes of the August 12, 2020, UGS Board meeting. Rick Chesnut 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:

Wetland mapping around Utah Lake to address key data gaps and improve mapping consistency; funding from the EPA; new funding to the UGS \$325,474; total project funding \$450,662; estimated start date 1/1/2021; estimated end date 6/30/2024.

Wetland plant guide for Utah's Central Basin and Range; funding from the EPA; new funding to the UGS \$90,046; total project funding \$125,061; estimated start date 1/1/2021; estimated end date 12/31/2023.

Improved spatial data and new field data to better characterize Utah's montane wetlands; funding from the EPA; new funding to the UGS \$349,266; total project funding \$465,687; estimated start date 1/1/2021; estimated end date 12/31/2023.

Dave Garbrecht motioned to formally approve the above proposals. Sam Quigley 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.

Personnel Changes

Interns:

Bear Jordan – Energy and Minerals

New hires:

Anna Farb, GIS/Cartographer in Editorial, to replace Rosemary Fasselin (now in Mapping).

New assignment:

Mark Milligan has accepted a career mobility opportunity to serve as the GIO Program Manager for 1 year. He replaces Mike Hylland who will continue as the UGS Deputy Director.

Retirement:

Tom Chidsey retired on October 1st of this year. Interviews to fill Tom's position will begin October 19th. Emily McDermott with the water program is leaving in a week. No other retirements known at this time. Anticipating 2 to 3 next year.

Recent activities – Looking forward

Recognition –

The Hintze Award will be announced October 19th. The UGS is a co-sponsor 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.”*

Energy and Minerals –

DOE Cane Creek project update - EGI and Zephyr Energy have signed an agreement which states that Zephyr will take over as operator of the strat well (well name = State 16-2). The well will be drilled on the existing well pad of State 16-42, near the town of Green River, Utah (away from red rock country and any potential drilling controversy). The well will TD at about 9850 feet, after capturing about 90 feet of Cane Creek core. We also plan to take several (50-75) sidewall cores in several additional uphole clastic zones that are thought to have hydrocarbon production potential. Spud date for the well is early to mid-November.

Mapping has begun at Gold Hill, a critical minerals project funded by the USGS. There seems to be significant interest in continued Critical Mineral research, and we expect to have the opportunity to apply for additional funding from USGS for next FY.

Christian Hardwick has started work on the Steptoe Valley geothermal project (in collaboration with Sandia).

Elliot Jagniecki is giving a presentation on the GSL mirabilite mounds (discovered December 2019) at the virtual GSA meeting at the end of October. Time lapse cameras will be installed on the beach near the GSL marina to capture (or attempt to) the formation of the mounds on film, with the purpose of documenting the conditions needed to form the mounds. This research continues our collaboration with State Parks and should generate significant public interest. Goal is to write a paper on the mounds and submit to the journal *Geology*.

The UGS continues to receive core donations from the Petroleum industry.

Geologic Hazards –

The Geologic Hazards Program recently completed detailed fault mapping (1:10,000 scale) in Cache Valley that includes the East and West Cache fault zones, the James Peak fault, and a few other faults in the area. The new fault trace mapping and special study area delineations will be added to the *Utah Geologic Hazards Portal* (<https://geology.utah.gov/apps/hazards/>) in the near future. Mapping and special study area delineation of the Wasatch fault zone is complete and now available online in the *Utah Geologic Hazards Portal*.

A manuscript on the Magna earthquake was submitted for publication in an upcoming special issue of *Seismological Research Letters*.

Groundwater & Wetlands–

GWP is conducting a search for an entry-level hydrogeologist to assist with a wide variety of ongoing hydrogeologic studies. We hope to advertise during the week of 10/12 and close the week of 11/30.

Diane Menuz and Hugh Hurlow spoke at the recent DNR Water Council meeting. DNR Executive Director Steed emphasized the importance of this group to addressing interagency water issues that are complex and commonly involve contradictory goals/needs. Hugh will likely serve as the official UGS representative on this committee with ongoing significant participation and input by Diane.

The FORGE project is beginning Year 2 of Phase 3. During the previous year UGS further implemented long-term monitoring of ground deformation, gravity, and groundwater levels. Additional geochemical sampling was also completed to refine the conceptual setting of the larger FORGE area. Another major focus was the planning and permitting for the 16A-32 deep deviated well (total length ~10,000 feet), that will be the first of a pair of wells that will test novel stimulation techniques of high-temperature low-permeability reservoirs. Drilling of this well is set to begin in late October.

The UGS was part of a consortium that was awarded a Department of Energy grant to assess "Geothermal Play Fairways in the Great Basin". This is a 5-year project overseen by the

University of Nevada, Reno. This award is in negotiation with DOE and work may begin in December 2020.

Mapping & Paleontology –

The UGS recently signed an agreement with the STEM Foundation to enable the acceptance of charitable donations for use on the preparation of the *Utahraptor* megablock fossils. The Paleo Group is in Canyonlands National Park this week and next to do a fossil inventory of the Triassic section just above the White Rim Trail. They recently completed an inventory of a large stretch of land east of Arches National Park for the BLM. Dr. Jim Kirkland is at Bryce Canyon National Park overseeing a road widening project in an area known for the presence of fossils.

The Geologic Mapping Group has begun work funded by \$551,258 in grants from three different USGS programs for FY21 to conduct geologic mapping and related work on several different projects, including detailed mapping in the Wasatch Urban Growth area, regional mapping of several parts of 30'x60' quadrangles scattered across the state, improvement of the state 500k geologic map GIS database, border matching with neighboring states, and contributions to national databases. These increased grants are all a result of significantly increased funding to the USGS due to increased emphasis on critical minerals, geologic hazards, water use and protection, and several other 'hot button' issues. The program ended FY20 with approximately 12 new maps released to the public.

Increased external funding puts significant pressure on the UGS to complete grant-funded projects on time with limited staff resources. For FY22 the USGS has indicated they plan to further expand their funding for STATEMAP to \$800,000, which is a >\$300,000 increase above last year's awards. The expanded funding is for STATEMAP only and does not include other USGS programs. For the UGS the challenge will be aligning staff resources to provide match for our FY21 STATEMAP proposal.

Pete Kilbourne raised the point that with his term ending in April on the board we need to appoint a new STATEMAP Advisory Committee representative.

Geologic Information & Outreach –

In lieu of Earth Science Week (ESW) in person, GIO has a new ESW webpage and are editing and finishing the first of a planned series of videos highlighting our five different ESW stations. The first videos are for our "Rock Talk" and highlight minerals, the three rock types, and the rock cycle.

GIO prepared a working draft for Bill's Geoheritage talk that was presented on 10/6 at the *America's Geoheritage Workshop II Fall Distinguished Speakers Program*, by the National Academies of Sciences, Engineering, and Medicine.

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 for sale in our bookstore. A press release and continued social media outreach is in progress.

Website visits remain high.

- Pre-Magna EQ, 3-5k /day
- Magna EQ aftermath, 9-15k /day
- Post-Magna EQ, 4-6k /day

The Wetland Plant App was released and is working well.

Funding and budget –

The State of Utah has experienced economic challenges related to the COVID-19 pandemic. The current economic environment underscores the need for the UGS to obtain stable resources to ensure the UGS can continue providing critical services to the State of Utah.

The Utah Legislature held a Special Session in June. Fortunately, they re-approved our FY21 Building Blocks. They did reduce our ‘out-of-state’ travel budget by \$5000.

The budget for FY21 will be tight but is manageable. FY21 will still present significant challenges as we expect Mineral Lease royalties to drop even further. Significant increases in outside funding, mostly from federal agencies, will help us this year.

With the impending loss in revenue to the State, our top priority continues to be to secure stable funding for the UGS.

The UGS continues to believe that Mineral Lease funds are not a sustainable, reliable funding source for core operating expenses. To that end the UGS 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 \$600,000. The funding from the legislature for maintenance catch-up may be needed to cover some of this shortfall. We continue to have concern that the State may ask us to reduce our budgets by an as-yet unknown percentage. With the loss of Mineral Lease funds, we will need to work hard to maintain our current funding levels.

At the UGS we are actively pursuing other funding options to maintain services to the State at current levels. Among those options are: Working with industry associations to ask the legislature to earmark certain tax revenues for use by UGS. Asking for additional increases in both ongoing and one-time allocations from General Funds. UGS leadership will continue to pursue other options that will require longer term efforts.

Financial Update –

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

The forecast for FY21 as of August is a surplus of \$514,901. FY21 is looking strong due to the higher than usual outside grant funding, currently forecasted at \$2.68 million. This may prove hard to attain and will have staff working hard to meet deliverables. We anticipate as the fiscal year progresses, we may need to scale back the revenue estimate by \$200 - \$300K. We have also increased our estimate of Mineral Lease funds slightly from \$450,000 to \$600,000. We have been able to approve many overdue staff salary increases and promotions and equipment purchases this year.

The FY22 Budget Request has been submitted to DNR Finance. The FY22 budget is estimated to be similar to our current fiscal year of FY21. We still anticipate Mineral Lease to be about the same and outside grant funding to be strong again. At this time, we have not received word from GOMB on building block approvals.

Legislative Update –

Nothing new.

Presentations:

Mark Milligan presented on his new role as Public Information Officer and what he is doing in that role. Michael Vanden Berg presented updates on the Cane Creek Project. Bill Keach shared a presentation about Utah's Geoheritage efforts.

Board Member update:

Terms end for Pete Kilbourne and Marc Eckels next April. Questions were raised regarding the process of finding replacements. It was determined anybody is able to do online applications and also recommendations as to who would be good in those positions will be accepted.

Board Meeting was adjourned at 10:58 a.m.