

**UGS BOARD MEETING**  
**Department of Natural Resources**  
**Utah Geological Survey**  
**1594 West North Temple, Suite 3110, Salt Lake City**  
**Wednesday, August 12, 2020**

The meeting of the UGS Board was called to order at 8:30 a.m.

**ATTENDANCE**

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

*UGS Staff:* Bill Keach, Mike Hylland, Jodi Patterson, Cheryl Gustin, Michael Vanden Berg, Grant Willis, and Hugh Hurlow

**APPROVAL OF MINUTES**

Pete Kilbourne motioned to approve the minutes of the April 15, 2020, UGS Board meeting. Marc Eckels 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:

*2020 Earthquake Working Groups; funding from the USGS; new funding to the UGS \$29,928; total project funding \$39,903; estimated start date 1/1/2021; estimated end date 12/31/2021.*

*2021 Northern Wasatch-West Cache Trenching; funding from the USGS; new funding to the UGS \$71,025; total project funding \$118,374; estimated start date 4/1/2021; estimated end date 3/31/2022.*

*2020 Magna Earthquake Subsurface; funding from the USGS; new funding to the UGS \$34,156; total project funding \$48,795; estimated start date 7/1/2021; estimated end date 6/30/2022.*

*Investigation of the Relationship Between Lake Brine, Halite and Mineral Precipitates, and Groundwater Adjoining Great Salt Lake; funding from the Division of Forestry, Fire, and State Lands; new funding to the UGS \$30,355; total project funding \$39,916; estimated start date 7/1/2020; estimated end date 6/30/2021.*

*Geophysical Imaging at Steptoe Valley, Nevada; funding from Sandia National Laboratories; new funding to UGS \$149,858; total project \$149,858; estimated start date 10/1/2020; estimated end date 3/31/2022.*

Ken Fleck motioned to formally approve the above proposals. Rick Chesnut 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:*

Raul Rios – Volunteer student, translating *Putting Down Roots in Earthquake Country* to Spanish.

Abby Magnum – Volunteer student

Rachel Willmore – Volunteer student

Elisabeth Stimmel – technician working on wetland assessment field work

Alyssa Turner – technician working on wetland assessment field work

#### *New hires:*

Rosemary Fasselin was hired from GIO to fill the open Sr. GIS Analyst position in the Geologic Mapping Program. Over 60 people from around the country applied for this position.

#### *Retirement:*

Tom Chidsey announced his intent to retire October 1<sup>st</sup> of this year.

No others known at this time.

### **Recent activities – Looking forward**

#### *Recognition –*

The Crawford Award was announced August 4, Lucy Jordan and co-authors were recognized for their publication, *Characterization of the Groundwater System in Ogden Valley, Weber County, Utah, with Emphasis on Groundwater–Surface-water Interaction and the Groundwater Budget*.

Board Field trip is being postponed due to COVID-19 and will possibly be rescheduled in the spring.

#### *Hazards –*

The Geologic Hazards Program recently released the first version of the *Utah Geologic Hazards Portal* (<https://geology.utah.gov/apps/hazards/>) containing all of our post-2008 geologic hazard mapping. This web application allows users to view various hazard maps, determine the mapped hazards and their relative severity in a particular area, and create a customized report for a specific area.

#### *Energy and Minerals –*

Several important research reports were published since the last Board meeting.

Kudos to authors Stephanie Mills and Andrew Rupke for the release of *Critical Minerals of Utah*. This report will be the go-to for anything related to critical minerals in Utah for years to come.

Ryan Gall completed an excellent report on the petroleum potential of the Mancos B for SITLA. He received high praise from SITLA and others.

Andrew Rupke and team finished the massive *Mineral Resource Evaluation of SITLA and BLM Lands Selected for Exchange in the John D. Dingell, Jr. Conservation, Management, and Recreation Act*; a huge undertaking.

Significant changes in the Utah Petroleum industry have generated several large donations of core to the UCRC. 1) 6500 ft of Green River Formation core from Finley, 2) Uinta Basin core and cuttings from Berry, 3) two new PR Springs tar sand cores, 4) three orphan cores (San Juan Co.) from Triple O slabbing in Denver, 5) all the remaining Utah material that was stored at the Oklahoma Geological Survey, and will soon get cores from Anadarko (Gothic shale and Ferron SS.) and several Phosphate core from north of Vernal. Kudos to the UCRC staff for handling all these new donations.

#### *Groundwater & Wetlands projects –*

Groundwater Section: prepared to manage drilling of a new groundwater monitoring well near Arches National Park; continued hydrogeologic studies of Juab Valley and Bryce Canyon City/Johns Valley; and continued projects monitoring hydrologic effects of environmental restoration projects. Secured funding for: a water budget study of Bryce Canyon City/Johns Valley; implementation of a new project "Ground-Based Measurement of Evapotranspiration in Utah"; and evaluation of geothermal energy potential of basins in western Utah and eastern Nevada.

Wetlands Section began field work in the central Great Basin establishing a wetland condition reference network and baseline assessment; continued digital wetland mapping, Cache Valley; and is working on two or three EPA Wetland Program Development Grants.

#### *Mapping & Paleontology –*

The Paleontology Group of the Mapping Program has been making good progress on preparation of the *Utahraptor* megablock fossils, including discovery and exposure of a nearly complete skull and jaw of an adolescent or young juvenile. The Paleo Group has also secured contracts

with the National Park Service to do a fossil inventory of the Triassic section just above the White Rim Trail in Canyonlands National Park, and with the BLM to do an inventory of a large stretch of land east of Arches National Park. Both areas are heavily visited and show evidence of vandalism and illegal fossil removal and need better monitoring, and possibly, critical specimens' recovery.

The Geologic Mapping Group was awarded over \$500,000 in grants from three different USGS programs 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 the FY with approximately 12 new maps released to the public.

#### *Geologic Information & Outreach –*

The Natural Resources Map & Bookstore launched its new online store at the end of July. The new Shopify platform offers a vastly superior user experience to the old X-cart platform, and we've already seen a sharp increase in online sales. The new platform will also streamline inventory and accounting procedures. The DOI (digital object identifier) system that was implemented for UGS publications last year is also paying dividends in terms of publication discoverability. In the first 11 months of its implementation, monthly resolutions (publications accessed through DOI) averaged about 1,250. Since April, monthly resolutions have averaged about 15,365.

Several GIO staff will have substantial involvement in FY21 work under the USGS-funded STATEMAP Supplemental and National Geologic Map Database (NGMDB) Cooperative Agreement projects, providing GIS and database management support. The Editorial Section is currently evaluating applications for the open GIS Analyst/Cartographer position, which we will fill with a paid, part-time student intern.

#### **Funding and budget –**

The State of Utah has experienced significant economic challenges related to the COVID-19 pandemic. The current situation 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 \$5,000.

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 \$450,000. The funding from the legislature for maintenance catch-up will be needed to cover this shortfall. We also worry about the State asking 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: (1) working with industry associations to ask the legislature to earmark a portion of certain taxes for use by UGS, and (2) 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 – Jodi Patterson**

Total expenditures for FY20 were \$7,824,929. Personnel continues to be our highest percentage at 87.20% of total expenditures. We had just over \$1.8 million in outside funding. Closing unspent balance was \$1,137,575, of which \$1 million was the Bonneville Salt Flats funding that will non-lapse to FY21. We had intent language for non-lapse authority for \$200,000; however, \$150,000 was already moved to FY21 by the legislature during the special session to address COVID-19 funding reductions, leaving us with \$50,000 and therefore having to lapse \$87,575.

The estimated operating budget for FY21 looks strong at the moment. I would like to draw your attention to the level of outside funding that is estimated at \$2,672,633. This level may be hard to realize and will definitely keep the staff busy. I have built in a place holder for \$250,000 of General Funds for equipment and maintenance needs that we previously identified and received funding for. We are estimating FY21 Mineral Lease funding at \$450,000. Therefore, I am currently estimating a balance of \$376k. However, I feel that we might not be able to realize the full level of outside funding and therefore that will use up this balance.

### **Legislative Update – Mike Hylland**

The Utah Legislature held a Special Session in June to address impacts to the State budget due to the COVID-19 pandemic. Prior to the session, Executive Branch departments were required to submit 2%, 5%, and 10% budget reduction scenarios (reduction from FY20 base budget) to their respective appropriations subcommittees. For the UGS, the Department of Natural Resources budget reduction scenarios each involved only a \$5,000 reduction in travel expense budget, and this is what the Natural Resources, Agriculture, and Environmental Quality Appropriations

Subcommittee recommended to the Executive Appropriations Committee during the Special Session. However, it was unclear whether or not the FY21 Building Block funding to the UGS, which was approved by the Legislature during the 2020 General Session, would be cut. Thanks to strong support from the UGS Board, DNR Administration and the Governor's Office, the Building Block funding was preserved, and the only cut for the UGS was the \$5,000 travel budget reduction.

**Presentations:**

Michael Vanden Berg, Grant Willis, and Hugh Hurlow gave updates on program grant funding.

**Board Meeting 2021:**

Board meetings were tentatively scheduled for 2021. The following dates are planned.

January 20, 2021

April 14, 2021

August 11, 2021

Board Meeting was adjourned at 11:26 a.m.