UGS BOARD MEETING Department of Natural Resources Utah Geological Survey 1594 West North Temple, Suite 3110, Salt Lake City Wednesday, August 22nd, 2018

The meeting of the UGS Board was called to order at 8:34 a.m.

Introduction of New Employees

Mackenzie Cope, Chris Wilkerson's replacement for GIO, and Trevor Schlossnagle, Stan Smith's replacement in Groundwater, were introduced to the Board.

ATTENDANCE

Board members: Marc Eckels – Chair, Dave Garbrecht, Rick Chesnut, Ken Fleck, Elissa Richards, Pete Kilbourne, Tom Faddies. *UGS Staff*: Rick Allis, Jodi Patterson, Mike Hylland, Pam Perri, Diane Menuz, Marshall Robinson, Jay Hill, Lance Weaver

Apologies: Sam Quigley

APPROVAL OF MINUTES

Mark Eckels addressed errors in Minutes of the meeting on May 10, 2018 that will be corrected.

Pete Kilbourne motioned to approve the minutes as written. Dave Garbrecht seconded the motion. The Board voted, and the motion carried.

Director's Report

Director Rick Allis noted that Steve Bowman was sick and would not be making the presentation on Data Preservation.

Pete Kilbourne commented the UGS has been doing an excellent job of making available geological data available to the public. Rick Allis then continued with the following report.

Summary

The last few months have been notable for staff turnover. Excellent candidates have applied for the vacancies. The closing financial documents for FY18 have been completed. The UGS increased its non-lapsing carry-forward from \$456k at the start of the year, to \$522k at the end of the year. FY19 is expected to be similar to FY18, but the operating budget is not yet fully compiled. Freeze on expenditures until mid-year unless an emergency circumstance.

Financial Update

Financial documents in the Board packet include the closing financial statements, and the contracts monitoring summary. The FY19 operating budget is a draft budget. The Utah Geological Survey completed FY18 with a carry-forward into FY19 of \$522,000, having started the year with a carry-forward from FY17 of \$456,000. The net increase of \$66,000 compares to an increase of \$270,000 in FY17, plus an additional \$116,000 that was lapsed. The main difference was less revenue in FY18. Mineral Lease royalties decreased by \$110,000, and external contract revenue (federal plus dedicated credits) decreased by \$283,000 (however contract revenue in FY17 was boosted by \$270,000 of pass-through funds). Total expenses in FY18 were \$75,000 less than in FY17 due largely to staff turnover savings. Travel and Current Expense categories were similar for both years.

The downward trend in Mineral Lease royalties is a concern, with the main factor being less production on federal lands (which generate the royalties). Mike Vanden Berg recently analyzed the trends and found that oil production on federal lands in Utah decreased from 33% in 2014 to an estimated 23% in 2018. Oil prices and total production have gradually risen over this time, but most of the new production is on tribal and private land. Natural gas production on federal land has decreased from close to 60% to 53% during this time, and prices have also been weak. Mike's revised Mineral Lease estimate to the UGS for FY19 is \$1.4 million. It was \$1,488,862 in FY18 and \$1,603,100 in FY17. Mike felt the Mineral Lease for FY2019 may be \$1,300,00 due to a decrease in Federal Land production.

Marc Eckels discussed the possibility of replacing Mineral Lease payments and receiving funding from the General Fund.

Rick Allis continued with his report. The Board packet contains pie charts of FY18 revenue sources, and expenditure by program and by category (see charts attached at end of this report). Total personnel costs are a major fraction of total expenses (86% in FY18) and mean that there are limited non-personnel expense mechanisms if a major funding decline occurs during the year. It is important to sustain the carry-forward balance in the range of \$500,000 to \$1 million to accommodate large unexpected funding swings.

We anticipate contract revenue for FY19 will be close to that in FY18 (about \$1.9 million). With the exception of Mineral Lease revenue being slightly down, most other revenue and expenditure patterns should also be similar to FY18. The Wetlands section recently received two contracts from EPA totaling close to \$400,000 over two years. The other major contract this year is the FORGE project with \$275,000 expected. Diane Menuz will brief the Board on the work being carried out by the Wetlands section.

Personnel Changes

In the Groundwater program, Trevor Schlossnagle fills the vacancy due to the resignation of Stan Smith. Trevor has a BS from SUNY Syracuse, and an unfinished MS from NM Tech. in groundwater hydrology. He has worked for a groundwater consulting company for the last three years.

The Energy and Minerals program has filled the two vacancies caused by the retirement of Craig Morgan and the resignation of Mark Gwynn (who joined DOGM in their Price office). Elliot Jagniecki has been appointed as a senior geologist and oil and gas specialist. He has a Ph.D. from SUNY Binghamton and has over 5 years' experience as a senior geologist in research and technology at ConocoPhillips, Houston. Ryan Gall has been appointed as a geologist; he has recently completed his MS at the U of U with a thesis on the Green River Formation in the Uinta Basin. He has spent this summer working for Teck-American at their Red Dog mine in Alaska.

The Geological Information and Outreach program is in the process of filling two vacancies caused by the retirement of Chris Wilkerson in June, and Vicky Clarke in September. Mackenzie Cope has just been appointed as a website manager and geologist. She has a BS in geology from SUU. Advertising for a graphics artist with strong website design skills is in progress.

Three staff have said they intend to retire at the end of the year: Ken Krahulec, Pam Perri, and Rick Allis. When Greg Beukelman's retirement at the start of the year is included, this amounts to a 13% annual turnover rate for 2018, which is unusually high. The UGS is approaching the end of the "baby-boom" staffing bubble that has been a characteristic of its age demographic pattern for at least the last decade. New staff with outstanding expertise and knowledge of new technologies are being hired, so the UGS will continue to fulfill its mission of providing high-quality geological information and advice to its stakeholders.

Building Block Requests

This is the time of year that state agencies start prioritizing their incremental budget (building block) requests for further consideration by the Governor and the legislature. The UGS has had a steadily growing need for data coordination, and, interactive databases so users can access geologic data remotely through the website. Over the past 10 years the number of interactive maps on the UGS website has risen from zero to 26 maps with over 1800 layers. Staffing and effort has been redirected to this task, but we have reached the point where ongoing maintenance (and addition of new data) as well as the development of new interactive maps to meet user needs requires an additional specialist. The formal application is included in this board packet. It has been formatted using the Success framework terminology set up by GOMB.

A second need that has also become critical is expansion of the Utah Core Research Center (UCRC). Recent donations have filled the facility, and lower-priority material is being temporarily housed in a Clearfield warehouse. A solution that best meets the needs of users is an expansion of warehouse space by 9000 sq ft, and a 3000 sq ft. area for improved core layout and examination. The draft request is attached, and initial discussions with DNR Executive have occurred. It is recognized that this request may take several years to progress.

Marc Eckels queried the location of the Amoco core from the Great Salt which would be valuable to preserve in the UCRC.

This concluded the Director's Report.

ACTION ITEM

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

Bryce Canyon National Park Hazard Mapping; funding from NPS; new funding to UGS \$53,560, total project cost \$107,300; estimated start 7/1/2019, estimated project end 6/30/2021.

Digital Scanning and Digitization of U.S. Forest Service Aerial Photography Index Sheets; funding from USFS; new funding to UGS \$5000 now; up to \$299,000 project total (no cost share; up to \$71,185 to Utah Correctional Industries); estimated start 6/18/2018, estimated project end 6/17/2021.

Utah Mineral Information Development (Phase 2); funding from U.S. BLM; new funding to UGS \$50,000, Funding from total project cost \$55,000; estimated start 10/1/2018, estimated end 6/30/2020.

Enhanced Attribution of Wetland Spatial Data-mapping Wetland Function in Cache Valley; funding from EPA, new funding from new funding to UGS \$215,237.80, total project cost \$286,983.73, estimated start 1/2019, estimated end 6/2021.

Reference Network and Baseline Data to Improve Protection of Utah's Central Basin Wetlands; funding from EPA, new funding to UGS \$248,215.43, total project cost \$330,953.81, estimated start 1/1/2019, estimated end 6/30/2021.

Paleoseismic Investigation of the Clarkson Mountain and Malad City Segments of the Wasatch Fault Zone, Box Elder County, Utah and Oneida County, Idaho; funding from USGS, new funding to UGS 62,659.63, total project cost \$125,319.26, estimated start 4/1/2019, estimated end 3/30/2020.

Detailed Mapping of the Late Quaternary-Active Traces of Northern Utah/Southern Idaho Faults: Collaborative Research with Idaho Geological Survey and Utah Geological Survey; funding from USGS, new funding to UGS \$28,250.86, total project cost \$56,501.73, estimated start 1/1/2019, estimated end 12/31/2019.

2019 Utah Earthquake Working Groups and Update of Working-related Databases; funding from USGS, new funding to UGS \$44,058.54, total project cost \$68,272.18, estimated start 1/1/2019, estimated end 12/31/2019.

Dave Garbrecht motioned to approve the proposals. Elissa Richards seconded the motion. The Board voted, and the motion carried.

Presentations:

Diane Menuz reviewed the goals and recent priorities of the wetlands section of the groundwater program.

Mike Hylland introduced the Geologic Information and Outreach program and reviewed recent changes.

Marshall Robinson gave an update on the website and advancements over the last 10 years.

Lance Weaver discussed the development of interactive geologic maps.

Jay Hill reviewed examples of recent databases he had working on.

UGS Annual Board Field Trip

Rick Allis reviewed the upcoming Boards field trip. It will depart from the north side of the DNR SLC Building at 7:30 am on Friday, September 14. Several Board members (Kilbourne, Fleck, and Chesnut) will join the trip at the Springville DNR office. The route will be south on 115 as far as Scipio, then on US50 and 89 to Panguitch and Cedar City. Accommodation has been reserved for each Board member at the Best Western Town and Country Inn on 189 N Main in Cedar City for both the Friday and Saturday nights. The return trip on Sunday will be via Milford, joining 115 at Cove Fort. The expected return to SLC is likely to be around noon-1 pm.

Marc Eckels addressed some issues regarding the hiring of a new director after Rick Allis' retirement and the hiring process.

The Board Meeting adjourned at 11:50 a.m.

Next Meeting: Wednesday January 9, 2019, 8:30 am, UGS meeting room.

RNAA DNR UTAH GEOLOGICAL SU	RVEY	
FY 2018 CLOSE-OUT SUMMARY		
FIXED STATE FUNDING:		
GENERAL FUND	\$	4,260,400
GENERAL FUND 1X CUT	\$	(83,300)
FY17 NON-LAPSE	\$	456,337
MINERAL LEASE	\$	1,488,862
LAND EXCHANGE DIST. ACCT.	\$	30,632
	\$	6,152,931
REVENUE COLLECTED:		
FEDERAL FUNDS	\$	745,490
DEDICATED CREDITS	\$	1,221,584
	\$	1,967,075
TOTAL REVENUE	\$	8,120,006
TOTAL EXPENDITURES	\$	7,598,422
NON-LAPSE (carry forward to FY19)	\$	521,584





CONTRACT PROPOSALS 2013 FORWARD BY UGS PROGRAMS

SUBMITTAL DATE	SUBMITTING PROGRAM	STATUS	PROJECT SHORT TITLE/DESCRIPTION	GRANTOR-FUNDING	AMOUNT OF PROPOSAL	AMOUNT TO UGS	CONTRACT PERIOD	PROPOSAL AWARDED?
1/16	ENERGY & MINERALS		DRILL HOLE DATA PRESERVATION, UTAH	U.S. BLM	158,138	158,138	2/16-1/2021	Y
1/16	ENERGY & MINERALS		TULAROSA NEW MEXICO GEOTHERMAL EXPIRATION	UofU/EGI	40,000	40,000	9/16-6/17	Y
1/16	ENERGY & MINERALS		GEOTHERMAL EASTERN GREAT BASIN, UT	UofU/EGI	66.667	60.000	7/16-6/17	Y
2/16	ENERGY & MINERALS		NORTH ARM SALT CRUST MONITORING GREAT SALT LAKE	DNR FFSL	8.853	7,235	7/16-6/17	Y
3/16	ENERGY & MINERALS	N/A	GEOLOGIC CHARACTERIZATION & FACIES ANALYSIS OF GSL MICROBIAKITES & ASSOCIATED SEDIMENTS	DNR FFSL	62,992	40,794	7/16-6/17	N
4/16	ENERGY & MINERALS	1946	OVERBURDEN	U.S. OFFICE OF SURFACE MINING	62,500	50,000	9/16-8/17	Y
8/16	ENERGY & MINERALS		CARBONSAFE ROCKY MOUNTAINS PHASE I	U.S. OFFICE OF SORFACE MINING	218,209	174,567	1/17-6/18	Y
						25,516		Y
8/16	ENERGY & MINERALS		DOD COMMUNITY SITING GRANT	UT Office of Energy Development	25,516	23,516 73,760 (50,000 pass	1/17-12/19	1
3/17	ENERGY & MINERALS	N/A	MAPPING THE FLOOR OF GREAT SALT LAKE USING BATHYMETRIC LIDAR	DNR FFSL	92,200	73,760 (50,000 pass thru)	5/17-6/18	N
1/16	ENERGY & MINERALS		GEOTHERMAL EASTERN GREAT BASIN - PHASE III	UofU/EGI	33,333	30,000	10/17-9/18	Y
7/17	ENERGY & MINERALS		UTAH MINERAL INFORMATION DEVELOPMENT	BLM	62,500	50,000	9/17-9/18	Y
8/17	ENERGY & MINERALS		GEOLOGIC & ENGINEERING INVESTIGATION INTO THE DEVELOPING WASATCH/FLAGSTAFF PLAY	EGI/Newfield	192,000	160,000	9/17-9/19	N
2/18	ENERGY & MINERALS	N/A	CARBONSAFE ROCKY MOUNTAINS PHASE I	UefU/EGI	250,000	200,000	8/18-7/20	N
8/18	ENERGY & MINERALS		UTAH MINERAL INFORMATION DEVELOPMENT - PHASE II	BLM	55,000	50,000	10/18-6/20	7
2/16	GROUND WATER		ASSESSMENT OF HABITAT REQUIREMENTS, HABITAT ABUNDANCE AND THREATS FOR TWO DECLINING AMPHIBIAN SPECIES	DNR-ESMF	14,288	10,671	7/16-6/17	Y
2/16	GROUND WATER		WESTERN USA ASSESSMENT OF HIGH VALUE MATERIALS IN GEOTHERMAL AND PRODUCED FLUIDS	UefU/EGI	82,071	73,864	7/16-7/18	Y
2/16	GROUND WATER		DRAINAGE BASIN	USDA FOREST SER.	63,365	50,050	4/16-4/17	Y
2/16	GROUND WATER		HYDROLOGIC MONITORING & MAPPING OF CRITICAL SPRING FED WETLAND HABITAT (continuation)	DNR-ESMF	19,888	14,916	7/16-6/17	Y
3/16	GROUND WATER		HYDROGEOLOGIC STUDY OF ROUND VALLEY (I YEAR)	WASATCH COUNTY	59,983	29,992	7/16-6/17	Y
3/16	GROUND WATER	N/A	HYDROGEOLOGIC STUDY OF ROUND VALLEY (2 YEAR)	WASATCH COUNTY	201,751	100,000	7/16-6/18	N
3/16	GROUND WATER		MONITORING GW RESPONSE TO PINYON & JUNIPER TREATMENTS FOR SAGE GROUSE ECOSYSTEM RESTORATION & FIRE HAZARD REDUCTION	UWRI & DEQ UDWQ	332,662	260,997	7/16-6/20	UWRI - Y; DEQ - N
4/16	GROUND WATER		NATIONAL WETLANDS CONDITIONS ASSESSMENT	DEQ-DIV WATER QUALITY	47,000	47,000	6/16-9/16	Y
5/16	GROUND WATER		NATIONAL GROUNDWATER MONITORING NETWORK PHASE 2	USGS	69,839	34,920	7/16-6/18	Y
5/16	GROUND WATER		MAPPING PROGRAM	EPA	264,231	198,173	10/16-6/19	Y
5/16	GROUND WATER		WETLAND INFO	EPA	297,466	223,099	10/16-6/19	Y
6/16	GROUND WATER GROUND WATER		WATER WELL CUTTING LOGGING FY 2017 QUANTIFYING TRENDS IN WATER QUALITY FROM SELEVTED WELLS IN UT AH	DIVISION OF WR DEO-DIV WATER QUALITY	32,000 8,100	16,000 4,050	7/16-6/17 10/16-9/18	Y
6/16	GROUND WATER	N/A	CANYON, NO, LOGAN	CACHE CO.	52.915	26.457	7/16-6/18	N
6/16	GROUND WATER	1946	MONITORING GW RESPONSE TO JUNIPTER	UDWO	7,219	7,219	7/16-6/17	Y
7/16	GROUND WATER		CASTLE VALLEY WATER QUALITY MONITORING FY17	GRAND CO.	7,224	3,612	9/16-6/17	Y
9/16	GROUND WATER		REMOTE MONITORING OF SHALLOW GROUNDWATER WELLS	DNR-DWR	5,000	5,000	10/16-10/17	Y
11/16	GROUND WATER		DUCHESNE RIVER AERIAL IMAGERY EVALUATION	DNR-DWR	28,200	28,200	5/17-6/18	Y
12/16	GROUND WATER		DRAINAGE BASIN - PHASE2	USDA FOREST SER.	66,465	50,000	5/17-6/18	Y
1/17	GROUND WATER		NATIONAL GROUNDWATER MONITORING NETWORK PHASE 3	EPA	64,142	32,071	7/17-7/19	Y
2/17	GROUND WATER		MAPPING GROUNDWATER QUALITY & CHEMISTRY ADJOINING THE GREAT SALT LAKE	DNR-FFSL	25,000	25,000	7/17-6/18	Y
2/17	GROUND WATER		MONITORING GROUNDWATER RESPONSE TO PINYON & JUNIPER TREATMENTS (YEAR 2)	UT WATERSHED RESTORATION INITIATIVE	67,298	50,473	7/17-6/18	Y
2/17	GROUND WATER		HABITAT	DNR-ESMF	18,662	13,997	7/17-6/18	Y
2/17	GROUND WATER		IMPROVING ASSESSMENT OF THREATS TO AMPHIBIANS THROUGH COMPLIATION OF HABITAT & RANGE DATA	DNR-ESMF	14,843	11,132	7/17-6/18	Y





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3/17	GROUND WATER		FORMATION	DNR-WATER RIGHTS	4,987	2,493	4/17-5/17	Y
5/17	GROUND WATER		MONITORING GW RESPONSE TO WESTERN JUNIPER TREATMENTS, TINTIC VALLEY-GEOCHEMICAL SAMPLING (YR 2)	DEQ-DIV WATER QUALITY	10,000	7,500	7/17-6/18	Y
6/17	GROUND WATER	N/A	CASTLE VALLEY TRACER STUDY	DNR-DWR & TOWN OF CASTLE VALLEY	54,883	27,441	8/17-6/18	N
6/17	GROUND WATER		WATER WELL CUTTING LOGGING FY 2018	DIVISION OF WR	32,000	16,000	7/17-6/18	Y
8/17	GROUND WATER	N/A	AQUIFER STORAGE & RECOVERY FEASIBILITY FOR RICHMOND CITY	RICHMOND CITY	34,681	17,341	10/17-6/19	N
8/17	GROUND WATER	N/A	JUAB VALLEY WATER BUDGET (3 YEAR PROJECT)	DNR/DWR	257,389	128,695	9/17-8/20	N
8/17	GROUND WATER		MONITORING GROUNDWATER WELLS IN TULE VALLEY	DWR/BLM	25,000	25,000	10/17-9/19	Y
8/17	GROUND WATER	N/A	MONITORING THE EFFECTS OF PINYON JUNIPER TREATMENTS ON SPRING FLOW & AQUATIC VEGETATION	BLM	154,437	115,825	9/2017-9/2022	N
8/17	GROUND WATER		EMIGRATION CREEK SEPTIC DISCHARGE STUDY	DEQ	71,052	35,526	1/18-6/19	7
9/17	GROUND WATER		CASTLE VALLEY GW QUALITY WELL MONITORING	CASTLE VALLEY	7,412	3,706	10/17-6/18	Y
9/17	GROUND WATER		REMOTE MONITORING OF GROUNDWATER WELLS IN SNAKE VALLEY - LELAND HARRIS	DNR/DWR	4,987	4,987	10/17-9/19	Y
11/17	GROUND WATER		NATIONAL GROUND WATER MONITORING NETWORK 2018	USGS	20,595	20,595	7/18-6/20	Y
3/18	GROUND WATER	N/A	MONITORING GW RESPONSE TO PINYON & JUNIPER TREATMENTS (Year 2)	Utah Watershed Restoration Initiative (UWRI)	50,093	37,569	4/18-6/18	N
3/18	GROUND WATER		HYDROLOGIC MONITORING OF CRITICAL GROUNDWATER FED HABITAT	DNR-ESMF	19,974	14,981	7/18-6/2019	Y
3/18	GROUND WATER		FILING DATA GAPS FOR NATIVE AQUATICS	DNR-ESMF	18,250	13,688	7/18-6/2019	Y
4/18	GROUND WATER	N/A	WATER QUALITY MONITORING OF JUNIPER TREATMENT PROGRAM YEAR 3	DIVISION OF WATER QUALITY	19,992	14,994	7/18-6/19	N
5/18	GROUND WATER		HYDROGEOLOGIC STUDY OF BRYCE CANYON CITY AREA & EMERY VALLEY, GARFIELD COUNTY	DNR-DWRI & NPS	285,472	142,736	7/18-12/21	Y
5/18	GROUND WATER		CASTLE VALLEY GW QUALITY WELL MONITORING	CASTLE VALLEY	8,700	4,350	7/18-6/19	Y
5/18	GROUND WATER		MONITORING GW RESPONSE TO PINYON & JUNIPER TREATMENTS (Year 3)	Utah Watershed Restoration Initiative (UWRI)	132,528	99,396	7/18-6/19	Y
5/18	GROUND WATER		ENHANCED ATTRIBUTION OF WETLANDS SPATIAL DATA - MAPPING WETLAND FUNCTION IN CACHE COUNTY	EPA	253,980	190,485	1/19-6/2021	Y
5/18	GROUND WATER		REFERNCING NETWORK & BASELINE DATA TO IMPROVE PROTECTION OF UTAH'S CENTERAL BASIN WETLANDS	EPA	292,893	219,670	1/19-6/2021	Y
6/18	GROUND WATER		WATER WELL CUTTING LOGGING FY 2019	DIVISION OF WR	32,000	16,000	7/18-6/19	Ŷ
1/16	HAZARDS		2016 UGS GEOLOGIC DATA PRESERVATION PROJECT	USGS	120,000	60,000	7/16-6/17	Y
3/16	HAZARDS	N/A	COMMON DATA FRAMEWORK FOR DISASTER RESILIENCE	ARIZONA G.S.	24,989	24,989	10/16-10/18	N
5/16	HAZARDS		LIDAR MAPPING OF THE WASATCH & WEST VALLEY FAULT ZONES	USGS	84,293	42,146	12/16-11/17	Y
5/16	HAZARDS		LIDAR MAPPING OF THE EAST & WEST CACHE VALLEY FAULT ZONES	USGS	71,515	50,046	7/17-6/18	Y
5/16	HAZARDS		PALEOSEISMIC TRENCHING INVESTIGATION OF THE LEVAN & FAYETTE SEGMENTS OF THE WFZ	USGS	115,017	57,508	5/17-4/18	Y
5/16	HAZARDS	N/A	CITIZEN PROVIDED OBSERVATION & EARTH HAZARDS DIGITAL CLEARING HOUSE PROTOTYPE	NASA	647,322	647,322 (212,459 pass-thru)	10/16-6/19	N





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6/16	HAZARDS	N/A	ALLUVIAL FAN INVENTORY ALONG THE WASATCH FRONT & WEST SIDE OF THE OQUIRRH MTNS	UDEM	20,000	20,000	8/16-12/16	. N
11/16	HAZARDS	N/A	2017-2018 UTAH EARTHQUAKE WORKING GROUPS AND UPDATE OF RELATED DATABASES	USGS	107,151	67,490	1/17-12/18	N
1/17	HAZARDS		2017 UGS GEOLOGIC DATA PRESERVATION PROJECT	USGS	123,650	61,825	7/17-6/18	Y
4/17	HAZARDS	N/A	LIDAR MAPPING OF THE EAST AND WEST CACHE FAULT ZONES	USGS	72,996	50,786	4/18-3/19	N
4/17	HAZARDS		MANTI-LA SAL NATIONAL FOREST LANDSLIDE INVENTORY MAPPING (CANAL CREEK)	USDA FOREST SER.	21,600	10,800	7/17-6/22	Y
4/17	HAZARDS		2018-2019 UTAH EARTHQUAKE WORKING GROUPS & UPDATE OF WORKING GROUP RELATED DATABASES	USGS	52,647	33,466	1/18-12/18	Y
7/17	HAZARDS		MANTI-LA SAL NATIONAL FOREST LANDSLIDE INVENTORY MAPPING (UPPER OAK CREEK)	USDA FOREST SER.	12,000	6,000	7/17-6/22	Y
1/18	HAZARDS		GEOTECHNICAL SUBSURFACE GEODATABASE	UDOT	80,000	40,000	7/18-6/19	Y
1/18	HAZARDS		2017 UGS GEOLOGIC DATA PRESERVATION PROJECT	USGS	123,852	61,802	7/18-6/19	Y
2/18	HAZARDS		UTAH GEOLOGIC HAZARDS DATABASE & CUSTOM REPORTING TOOL	UDEM/FEMA	25,665	19,248	3/18-6/18	Y
3/18	HAZARDS		BRYCE CANYON NATIONAL PARK LIDAR	NATIONAL PARK SERVICE	43,000	0 (all pass-thru)	4/18-6/19	Y
5/18	HAZARDS		NORTHERN WASATCH FAULT ZONE TRENCHING PROPOSAL	USGS	125,319	62,660	4/19-3/2020	?
5/18	HAZARDS		NORTHERN UTAH & SOUTHEASTERN IDAHO FAULT MAPPING	USGS	56,502	28,251	1/19-12/19	?
5/18	HAZARDS		2019 UTAH EARTHQUAKE WORKING GROUPS & UPDATE OF WORKING GROUP RELATED DATABASES	USGS	68,272	44,059	1/19-12/19	?
6/18	HAZARDS		DIGITAL SCANNING OF US FOREST SERVICE AERIAL PHOTO INDEX SHEETS	USFS	\$5,000 now; up to \$299,000	\$5,000 now; up to \$299,000	7/18-6/21	Y
6/15	HAZARDS		BRYCE CANYON NATIONAL PARK GEOLOGIC HAZARDS MAPPING	NATIONAL PARK SERVICE	107,300	53,650	7/19-6/21	?
1/16	PALEO	N/A	PALEO SURVEY & INVENTORY OF MORRISON & CEDAR MTN FORMATIONS	BLM	21,481	10,740	4/16-9/16	N
5/16	PALEO		EVALUATION, INVENTORY & INITIAL PLANNING FOR AN INTERPRETIVE DINOSAUR TRAIL AT FOSSIL POINT, EMERY COUNTY, UTAH	BLM	11,309	11,309	4/16-6/17	Y
6/16	PALEO	时代的第一时	CANYON COUNTRY PALEONTOGICAL SURVEYS	BLM	42,800	21,400	8/16-9/16	Y
6/16	PALEO		UTAH'S BLM POTENTIAL FOSSIL YIELD CLASSIFICATIONS (PFYC)	BLM	60,000	30,000	11/16-6/17	Y
4/17	PALEO		WESTERN BLANDING BASIN PALEO SURVEY	BLM	21,480	10,740	7/17-12/17	Y
5/17	PALEO	N/A	WESTERN BLANDING BASIN - MORRISON STRATIGRAPHY DOCUMENTATION	BLM	53,912	26,956	10/17-10/18	N
7/17	PALEO	N/A	MID MESOZOIC AT NORTHERN CAPITOL REEF NATIONAL PARK (CARE)	BLM	35,401	17,701	10/17-6/18	N
7/17	PALEO	No. 466	PALEO DATABASE DEVELOPMENT	BLM	7,500	7,500	7/17-6/18	Y
10/17	PALEO	N/A	PALEO EXCAVATION OF DOELLING'S BOWL BONEBED - PHASE II	CANYONLANDS NATURAL HISTORY ASSOCIATION	18,953	9,476	7/18-9/18	N
6/18	PALEO		PALEO DATABASE DEVELOPMENT - Continuation/Additional funding	BLM	30,000	30,000	7/18-6/19	Y
8/18	PALEO		MID MESOZOIC AT NORTHERN CAPITOL REEF NATIONAL PARK (CARE)	BLM	50,032	25,016	9/18-9/19	?
1/16	ADMINISTRATION		(NEVADA)	U of NEVADA	60,000	60,000	2/16-9/17	Y
4/16	ADMINISTRATION		PHASE 2 FORGE (DOE total project approx. \$836,828)	DOE/EGI	201,469	201,469	10/16-1/17	Y
4/16	ADMINISTRATION		PHASE 2 FORGE (DOE total project approx. \$9.5 mil)	DOE/EGI	475,000	475,000	2/17-2/18	Y
2/18	ADMINISTRATION		PHASE 2C FORGE	DOE/EGI	273,185	273,185	7/18-6/19	Y

As of 8/15/18

НАТИ	Fiscal Year En June 30, 2018	nding	Revei 7,598,	
GEOLOGICAL SURVEY Revenue	(Unaudited) 7,598,422		Dedicated Credits Federal Funds 16% 10%	
Beginning Balance (FY17 non-lapse)	456,337	6.01%	Exchange	
General Funds	4,177,100	54.97%	Lands	
Mineral Lease	1,488,862	19.59%	0%	
Exchange Lands	30,632	0.40%		
Federal Funds	745,490	9.81%		General Funds
Dedicated Credits FY18 Ending Balance/Non-lapse to FY19	1,221,585 (521,584)	16.08% -6.86%	Mineral Lease 19%	55%
	7,598,422	100.00%	Geologic Information &	Administratio
Expenditures			22%	n Geologic 10% Hazards 15%
Administration	747,373	9.84%		
Geologic Hazards	1,149,704	15.13%		UGS Board
UGS Board	5,383	0.07%		-0%
Geologic Mapping & Paleontology	1,291,658	17.00%		
Energy & Mineral Resources	1,415,832	18.63%		
Groundwater	1,272,888	16.75%	Groundwater 17%	
Geologic Information & Outreach	1,715,584	22.58%		Geologic
	7,598,422	100.00%	Energy & Mineral Resources 19%	Mapping & Paleontology 17%

Expenditures



Personnel 86%