

Part I – Agency Profile

Agency Overview

The Idaho Geological Survey (IGS) is the lead state agency for the collection, interpretation, and dissemination of geologic and mineral data for Idaho. The agency has served the state since 1919 and prior to 1984 was named the Idaho Bureau of Mines and Geology. The agency is currently staffed by 11.24 state-funded FTEs and 16 externally funded temporary full and part-time employees.

The Survey's mission is to provide the state with timely and relevant geologic information. Members of the IGS fulfill this mission through applied geologic research and strong collaborations with federal and state agencies, academia, and the private sector. IGS research focuses on geologic mapping, geologic hazards, hydrogeology, geothermal energy, oil and gas, and metallic and industrial minerals. The Survey's Digital Mapping Laboratory is central to compiling, producing, and delivering new digital geologic maps and publications for the agency. The IGS is also engaged in dissemination of historic mining records, community service, and earth science education. As Idaho grows, demand is increasing for geologic and geospatial information related to energy, mineral, and water resource development, and landslide and earthquake hazards.

Core Functions/Idaho Code

Idaho Code Title 47, Chapter 2, defines the authority, administration, advisory board members, functions, and duties of the IGS.

- **Section 47-201:** Creates the IGS to be administered as a special program at the University of Idaho. Specifies the purpose as the lead state agency for the collection, interpretation, and dissemination of geologic and mineral information. Establishes a Survey advisory board and designates advisory board members and terms.
- **Section 47-202:** Provides for an annual meeting of the advisory board, and location of the chief office at the University of Idaho. Specifies the director of the IGS report to the President of the University through the Vice President for Research and Economic Development. Specifies for the appointment of a state geologist.
- **Section 47-203:** Defines the duties of the IGS to conduct statewide studies in the field and in the laboratory and to prepare and publish reports on the geology, hydrology, geologic hazards, and mineral resources of Idaho. Provides for establishment of a publication fund. Allows the Survey to seek and accept funded projects from and to cooperate with other agencies. Allows satellite offices at Boise State University and Idaho State University.
- **Section 47-204:** Specifies the preparation, contents, and delivery of a Survey Annual Report.

Revenue and Expenditures

Revenue	FY 2019	FY 2020	FY 2021	FY 2022
General Fund	\$1,085,100	\$1,123,500	\$1,105,200	\$1,128,300
Total	\$1,085,100	\$1,123,500	\$1,105,200	\$1,128,300
Expenditures	FY 2019	FY 2020	FY 2021	FY 2022
Personnel Costs	\$974,400	\$896,832	\$516,492	\$569,376
Operating Expenditures	\$105,336	\$140,456	\$368,667	\$475,581
Capital Outlay	\$5,364	\$8,590	\$164,741	\$83,343
Trustee/Benefit Payments	0	0	0	0
Furlough Deduction	N/A	N/A	\$55,300	NA
State Cut (1%)	N/A	\$11,200	N/A	N/A
COVID-19 State Cut (1%)	N/A	\$11,200	N/A	N/A
State Benefits Reduction	N/A	\$2,200	N/A	N/A
Return to State	N/A	\$53,022	N/A	N/A
Operations/Equipment Funding from Reserves	N/A	\$58,447	N/A	N/A
Total	\$1,085,100	\$1,181,947	\$1,105,200	\$1,128,300
BALANCE		-\$58,447		

Profile of Cases Managed and/or Key Services Provided

Cases Managed and/or Key Services Provided	FY 2019	FY 2020	FY 2021	FY 2022
Square Miles of Geological Mapping	269	269	428	526
Number of Geologic Reports	14	13	15	12
Number of Geologic Presentations	26	25	28	48
Number of Grants and Contracts	10	15	16	13

FY 2022 Performance Highlights

Externally Funded Grant and Contract Dollars

IGS was funded and supported through 13 grants in FY 22 which consisted of a mix from federal, state, and private industry. Grant and contract dollars increased from \$662,366 in FY 21 to \$930,195 in FY 22. The USGS funding represents the principal source of external support for IGS with seven concurrent awards in FY 22. In addition, funding from state agency partners (Idaho Department of Water Resources, Idaho Department of Lands, and Idaho Department of Commerce IGEM) has enabled hydrogeologic projects in the Big Lost River Valley and Raft River Valley, research on Idaho-sourced rare earth elements, and continuation of abandoned mines/data preservation efforts (in association with USGS). IGS has also received funding from the University of Nevada, Reno to assist with a U.S. Department of Energy initiative focusing on geothermal energy exploration. Non-government support from the private sector includes Electra Battery Materials Corporation to study magnetite in the Iron Creak area.

In FY 22 IGS also initiated and directed a partnership between the USGS and three private mining exploration companies to support a large airborne geophysical investigation in the Salmon Mountains area to address Critical Mineral exploration. The effort by the IGS and its partners allowed to expand the scope and area of the investigation by over 20%. This kind of partnership is not captured by any of the performance measures included in this report but constitutes a fundamental part of the IGS mission in support of Idaho industry and economy.

Part II – Performance Measures

Performance Measure		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Goal 1						
Achieve excellence in collecting and disseminating geologic information and mineral data to the public, governmental agencies, elected officials, educational institutions, civic and professional organizations, and the mining, energy, agriculture, utility, construction, insurance, and banking industries. Continue to strive for increased efficiency and access to survey information primarily through publications, website products, in-house collections, and customer inquiries. Emphasize website delivery of digital products and compliance with new revision of state documents requirements (Idaho Statute 33-2505).						
1. Number of Published Reports on Geology/Hydrology/Geohazards/Mineral & Energy Resources Goal 1. Objective A, Measure I	actual	11	11	18	14	-----
	target	20	25	11	11	11
2. Number of Website Viewers Goal 1. Objective B, Measure I	actual	137,863 ¹	278,919	21,388 ³	116,017	-----
	target	NA	NA	140,000	279,000	120,000
3. Number of Website Products Used or Downloaded Goal 1. Objective B, Measure II	actual	----- ²	----- ²	5,621 ³	35,851	-----
	target	215,000	252,882	40,000	40,000	32,000
4. Percentage of Survey documents available through these programs Goal 1. Objective C, Measure I	actual	~99%	~99%	~99%	~99%	-----
	target	~99%	~99%	~99%	~99%	~99%
5. Percentage of published Geologic Maps that are uploaded to the national website depicting detailed geologic mapping in Idaho Goal 1. Objective D, Measure I	actual	100%	100%	100%	100%	-----
	target	100%	100%	100%	100%	100%

¹Due to the implementation of a different web statistic tool, the actual measure for FY 19 may be different than what was reported in previous Performance Reports.

² We did not have the data to calculate this measure due to the ongoing implementation of a different web statistic tool on our website. An estimate for this measure for FY 19 was reported in the FY 21 Strategic Plan in error.

³ We launched our new website and started collecting web stats on April 29, 2021, so these measures are only for the period between April 29, 2021 and June 30, 2021. Caution should be used when comparing FY 21 web stats to previous years as we started using a new web statistic tool on April 29, 2021. The number of website viewers extrapolated over the entire fiscal year would be 123,622, and the number of website products used or downloaded would be 32,489.

Performance Measure		FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Goal 2						
Promote, foster, and sustain a climate for research excellence. Develop existing competitive strengths in geological expertise. Maintain national level recognition and research competitiveness in digital geological mapping and applied research activities. Sustain and build a strong research program through interdisciplinary collaboration with academic institutions, state and federal land management agencies, and industry partners.						
6. Increase the geologic map coverage of Idaho by mapping priority areas of socioeconomic importance. Identify and study areas with geologic resources of economic importance and identify and study areas that are predisposed to geologic hazards. Goal 2. Objective A, Measure I	actual	38.2%	38.2%	38.7%	39.3%	-----
	target	40.5%	39.1%	38.6%	38.6%	39.2%
7. Increase externally funded grant and contract dollars with a particular focus of securing new sources of funding from the private sector. Goal 2. Objective B, Measure I	actual	\$396,556	\$639,902	\$662,366	\$930,195	-----
	target	\$467,923	\$485,000	\$500,000	\$500,000	\$500,000
Goal 3						
Support knowledge and understanding of Idaho’s geologic setting and resources through earth science education. Achieve excellence in scholarly and creative activities through collaboration and building partnerships that enhance teaching, discovery, and lifelong learning.						
8. Number of educational programs provided to public and private schools and the public at large. Goal 3. Objective A, Measure I	actual	18	48	30	33	-----
	target	15	19	18	18	18

Performance Measure Explanatory Notes

IGS maintains several live databases. Some of the updates to the databases are not captured in the number of publications but constitute a continued baseline effort of the Survey in the fulfillment of its mission.

FY 22 Grants and Contracts

Abandoned Mine Lands Project, Task 6: R.S. Lewis (Idaho Department of Lands, April 2021-March 2023, \$169,445).

Data Preservation 14: R.S. Lewis and V.S. Gillerman (U.S. Geological Survey Data Preservation Program, July 2021-July 2022, \$68,505).

Development of Idaho-sourced Rare Earth Elements Drilling and Extraction: Award to University of Idaho, A. Mirkouei, PI, with Idaho Geological Survey co-PIs, C. Berti and V.S. Gillerman (Idaho Department of Commerce IGEM Program, March 2022 – March 2023, IGS portion is \$64,264 of UI award of \$348,241).

Geologic mapping in the Idaho cobalt belt I: R.S. Lewis (U.S. Geological Survey Earth-MRI Program, August 2019-January 2022, \$100,000).

Geologic mapping in the Idaho cobalt belt II: R.S. Lewis (U.S. Geological Survey Earth-MRI Program, September 2021-August 2023, \$100,000).

FY 22 Grants and Contracts (continued)

Geologic Mapping in the Preston, Weiser, Salmon, and Elk City areas and GeMS-compliant database work: R.S. Lewis and D.M. Feeney (U.S. Geological Survey STATEMAP Program, July 2020-October 2021, \$318,392).

Geologic Mapping in the Preston, Weiser, Salmon, and Elk City areas and GeMS-compliant database work: R.S. Lewis, D.M. Feeney, and R.V. Di Fiori (U.S. Geological Survey STATEMAP Program, July 2021-July 2022, \$427,233).

Groundwater Budget for the Big Lost River Valley: A.L. Clark (Idaho Department of Water Resources, December 2018 – October 2021, \$125,000).

Innovative Geothermal Exploration through Novel Investigations of Undiscovered Systems (INGENIOUS): C. Berti (University of Nevada, Reno, February 2022-June 2022, \$196,112).

Mapping and Neotectonic Investigation of the Sawtooth Fault, Central Idaho: Collaborative Research with Idaho Geological Survey, Idaho State University, and BGC Engineering, Inc.: Z.M. Lifton (U.S. Geological Survey NEHRP Program, June 2021-May 2022, \$23,528.60).

Mapping and Preliminary Geochronology of the Quaternary-Active Halfway Gulch Fault, SW Idaho: Collaborative Research with Idaho Geological Survey and Lettis Consultants International: Z.M. Lifton (U.S. Geological Survey NEHRP Program, July 2021-June 2022, \$41,369.33).

Petrochemical Study of Magnetite in the Iron Creek Co-Cu Area, Lemhi County: V.S. Gillerman (Electra Battery Materials Corporation, December 1, 2021–December 31, 2022, \$16,459).

Raft River Basin Hydrogeologic Investigation – Phase 2 (Hydrogeologic Framework and Water Budget): A.L. Clark (Idaho Department of Water Resources, January 2021-December 2023, \$375,000).

For More Information Contact

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