WHAT IS GEO SCIENCE?

Geoscience is the study of the Earth and the complex geologic, marine, atmospheric, and hydrologic processes that sustain life and the economy. Understanding the Earth’s surface and subsurface, its resources, history, and hazards allows us to develop solutions to critical economic, environmental, health, and safety challenges.

By the numbers: IDAHO

- 2,749 geoscience employees (excludes self-employed)¹
- 5.35 billion gallons/day: total groundwater withdrawal³
- $191 million: value of nonfuel mineral production in 2017⁴
- 40 total disaster declarations, including 16 fire, 12 flood, and 7 severe storm disasters (1953-2017)⁶
- $2.35 million: NSF GEO grants awarded in 2017¹⁴

ENERGY AND MINERALS IN IDAHO

- $191 million: value of nonfuel mineral production in 2017⁴
- Phosphate rock, sand and gravel, crushed stone: top three nonfuel minerals in order of value produced in 2017⁴
- 2.45 million megawatt hours: wind produced in 2017⁵
- 9.51 million megawatt hours: hydroelectricity produced in 2017³
- 494,000 megawatt hours: solar produced in 2017⁵
- 68,000 megawatt hours: geothermal produced in 2017⁵

WORKFORCE IN IDAHO

- 2,749 geoscience employees (excludes self-employed) in 2017¹
- $74,008: average median geoscience employee salary¹
- 6 academic geoscience departments²

WATER USE IN IDAHO

- 5.35 billion gallons/day: total groundwater withdrawal³
- 12.4 billion gallons/day: total surface water withdrawal³
- 276 million gallons/day: public supply water withdrawal³
- 15.3 billion gallons/day: water withdrawal for irrigation³
- 58 million gallons/day: self-supplied industrial fresh water withdrawal³
- 76% of the population is served by public water supplies³

NATURAL HAZARDS IN IDAHO

- 40 total disaster declarations, including 16 fire, 12 flood, and 7 severe storm disasters (1953-2017)⁶
- $123 million: preparedness grants (2005-2017)⁶
- $17 million: public assistance grants (2005-2017)⁶
- 24 weather and/or climate events, each with costs exceeding $1 billion (inflation adjusted) (1980-2017)⁷

⁴ U.S. Geological Survey, Mineral Commodity Summaries 2018
⁵ U.S. Energy Information Administration
⁶ FEMA Data Visualization: Summary of Disaster Declarations and Grants (accessed May 2, 2018)
Geoscience, Idaho, and Federal Agencies

U.S. GEOLOGICAL SURVEY (USGS)
- $1.15 billion: total USGS budget in FY 2018 (5.8% increase from FY 2017)8
- The National Cooperative Geologic Mapping Program funds geologic mapping projects with federal (FEDMAP), state (STATEMAP), and university (EDMAP) partners
- $3.98 million: Idaho STATEMAP funding (1993-2016)9
- Boise State University, Idaho State University, and University of Idaho have participated in EDMAP9
- USGS streamgages collect real-time or recent streamflow, groundwater, and water-quality data throughout Idaho

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)
- $20.7 billion: total NASA budget in FY 2018 (5.5% increase from FY 2017)10
- $1.9 billion: total NASA Earth Science budget in FY 2018 (0% change from FY 2017)10
- Gravity Recovery and Climate Experiment (GRACE) satellites measure groundwater changes in Idaho
- Soil Moisture Active Passive (SMAP) satellite measures soil moisture in Idaho

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)
- $5.9 billion: total NOAA budget in FY 2018 (4.1% increase from FY 2017)11
- Next-generation geostationary (GOES) and polar orbiting (JPSS) satellites provide weather forecasting over Idaho
- Deep Space Climate Observatory (DISCOVR) satellite monitors radiation and air quality over Idaho
- 13 National Weather Service Automated Surface Observing Systems (ASOS) stations in Idaho12
- 150 National Weather Service Cooperative Observer Program (COOP) sites in Idaho12

NATIONAL SCIENCE FOUNDATION (NSF)
- $7.8 billion: total NSF budget in FY 2018 (4% increase from FY 2017)13
- $1.4 billion: total NSF Geosciences Directorate (GEO) awards in FY 2017 (7.2% increase from FY 2016)14
- 17 NSF GEO awards in Idaho totaling $2.35 million in 201714
- $1.1 million: NSF GEO grants awarded to University of Idaho in 201714

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
- $8.1 billion: total EPA budget in FY 2018 (0% change from FY 2017)15
- 6 active superfund sites in Idaho in 201816
- $8.24 million: Drinking Water State Revolving Fund (DWSRF) grants in Idaho in 201717

FEDERAL FACILITIES IN IDAHO
- USGS Idaho Water Science Center, Boise
- USDA-ARS Northwest Watershed Management Research Center, Boise
- National Interagency Fire Center, Boise

YOUR STATE SOURCE FOR GEOSCIENCE INFORMATION
Idaho Geological Survey
University of Idaho, Morrill Hall
875 Perimeter Drive MS3014
Moscow, ID 83844
https://www.idahogeology.org
208-885-7991

8 U.S. Department of the Interior, FY 2019 Budget in Brief
9 U.S. Geological Survey, National Cooperative Geologic Mapping Program
10 National Aeronautics and Space Administration, FY 2019 Budget Estimates
11 National Oceanic and Atmospheric Administration, FY 2019 Bluebook
12 NOAA In Your State and Territory
13 U.S. House of Representatives, FY 2018 Omnibus Spending Bill (Division B) – Commerce, Justice, Science, and Related Agencies Appropriations Act, 2018
14 National Science Foundation, Budget Information System
15 U.S. House of Representatives, FY 2018 Omnibus Spending Bill (Division G) – Department of the Interior, Environment, and Related Agencies Appropriations Act, 2018
16 U.S. Environmental Protection Agency, Superfund Sites
17 U.S. Environmental Protection Agency, Drinking Water State Revolving Fund National Information Management System Reports

AGI’s Geoscience Policy and Critical Issues programs support well-informed public policy and decision making by providing information and facilitating dialogue between the geoscience community and decision makers at all levels.

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