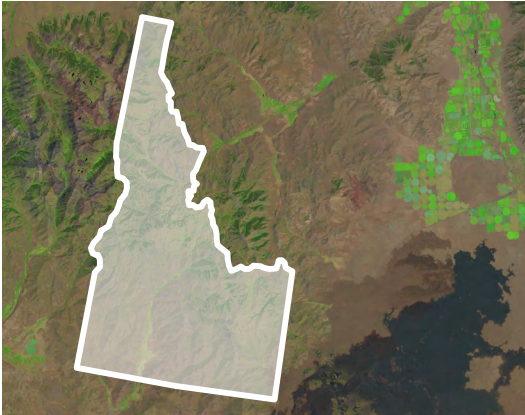


## WHAT IS GEOSCIENCE?

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.



Satellite image: NASA/USGS Landsat Program. State outline (not to scale): Matt Battison.

## WORKFORCE IN IDAHO

- 2,749 geoscience employees (excludes self-employed) in 2017<sup>1</sup>
- \$74,008: average median geoscience employee salary<sup>1</sup>
- 6 academic geoscience departments<sup>2</sup>

## WATER USE IN IDAHO

- 5.35 billion gallons/day: total groundwater withdrawal<sup>3</sup>
- 12.4 billion gallons/day: total surface water withdrawal<sup>3</sup>
- 276 million gallons/day: public supply water withdrawal<sup>3</sup>
- 15.3 billion gallons/day: water withdrawal for irrigation<sup>3</sup>
- 58 million gallons/day: self-supplied industrial fresh water withdrawal<sup>3</sup>
- 76% of the population is served by public water supplies<sup>3</sup>

## By the numbers: IDAHO

- 2,749 geoscience employees (excludes self-employed)<sup>1</sup>
- 5.35 billion gallons/day: total groundwater withdrawal<sup>3</sup>
- \$191 million: value of nonfuel mineral production in 2017<sup>4</sup>
- 40 total disaster declarations, including 16 fire, 12 flood, and 7 severe storm disasters (1953-2017)<sup>6</sup>
- \$2.35 million: NSF GEO grants awarded in 2017<sup>14</sup>

## ENERGY AND MINERALS IN IDAHO

- \$191 million: value of nonfuel mineral production in 2017<sup>4</sup>
- Phosphate rock, sand and gravel, crushed stone: top three nonfuel minerals in order of value produced in 2017<sup>4</sup>
- 2.45 million megawatt hours: wind produced in 2017<sup>5</sup>
- 9.51 million megawatt hours: hydroelectricity produced in 2017<sup>5</sup>
- 494,000 megawatt hours: solar produced in 2017<sup>5</sup>
- 68,000 megawatt hours: geothermal produced in 2017<sup>5</sup>

## NATURAL HAZARDS IN IDAHO

- 40 total disaster declarations, including 16 fire, 12 flood, and 7 severe storm disasters (1953-2017)<sup>6</sup>
- \$22 million: mitigation grants (2005-2017)<sup>6</sup>
- \$123 million: preparedness grants (2005-2017)<sup>6</sup>
- \$17 million: public assistance grants (2005-2017)<sup>6</sup>
- 24 weather and/or climate events, each with costs exceeding \$1 billion (inflation adjusted) (1980-2017)<sup>7</sup>

<sup>1</sup> U.S. Bureau of Labor Statistics, Occupational Employment Statistics, May 2017  
<sup>2</sup> American Geosciences Institute, Directory of Geoscience Departments, 53rd Edition (2018)  
<sup>3</sup> U.S. Geological Survey, Estimated Use of Water in the United States in 2015

<sup>4</sup> U.S. Geological Survey, Mineral Commodity Summaries 2018  
<sup>5</sup> U.S. Energy Information Administration  
<sup>6</sup> FEMA Data Visualization: Summary of Disaster Declarations and Grants (accessed May 2, 2018)  
<sup>7</sup> NOAA National Centers for Environmental Information, U.S. Billion-Dollar Weather and Climate Disasters from 1980 to 2018 (accessed April 6, 2018)

AGI is a network of 52 member societies, representing more than 260,000 geoscientists.

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## U.S. GEOLOGICAL SURVEY (USGS)

- \$1.15 billion: total USGS budget in FY 2018 (5.8% increase from FY 2017)<sup>8</sup>
- 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)<sup>9</sup>
- Boise State University, Idaho State University, and University of Idaho have participated in EDMAP<sup>9</sup>
- USGS streamgages collect real-time or recent streamflow, groundwater, and water-quality data throughout Idaho

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## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

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

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## NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

- \$5.9 billion: total NOAA budget in FY 2018 (4.1% increase from FY 2017)<sup>11</sup>
- Next-generation geostationary (GOES) and polar orbiting (JPSS) satellites provide weather forecasting over Idaho
- Deep Space Climate Observatory (DISCOVER) satellite monitors radiation and air quality over Idaho
- 13 National Weather Service Automated Surface Observing Systems (ASOS) stations in Idaho<sup>12</sup>
- 150 National Weather Service Cooperative Observer Program (COOP) sites in Idaho<sup>12</sup>

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## NATIONAL SCIENCE FOUNDATION (NSF)

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

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## U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

- \$8.1 billion: total EPA budget in FY 2018 (0% change from FY 2017)<sup>15</sup>
- 6 active superfund sites in Idaho in 2018<sup>16</sup>
- \$8.24 million: Drinking Water State Revolving Fund (DWSRF) grants in Idaho in 2017<sup>17</sup>

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## FEDERAL FACILITIES IN IDAHO

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

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## 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

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<sup>8</sup> U.S. Department of the Interior, FY 2019 Budget in Brief

<sup>9</sup> U.S. Geological Survey, National Cooperative Geologic Mapping Program

<sup>10</sup> National Aeronautics and Space Administration, FY 2019 Budget Estimates

<sup>11</sup> National Oceanic and Atmospheric Administration, FY 2019 Bluebook

<sup>12</sup> NOAA In Your State and Territory

<sup>13</sup> U.S. House of Representatives, FY 2018 Omnibus Spending Bill (Division B) – Commerce, Justice, Science, and Related Agencies Appropriations Act, 2018

<sup>14</sup> National Science Foundation, Budget Information System

<sup>15</sup> U.S. House of Representatives, FY 2018 Omnibus Spending Bill (Division G) – Department of the Interior, Environment, and Related Agencies Appropriations Act, 2018

<sup>16</sup> U.S. Environmental Protection Agency, Superfund Sites

<sup>17</sup> U.S. Environmental Protection Agency, Drinking Water State Revolving Fund National Information Management System Reports

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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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