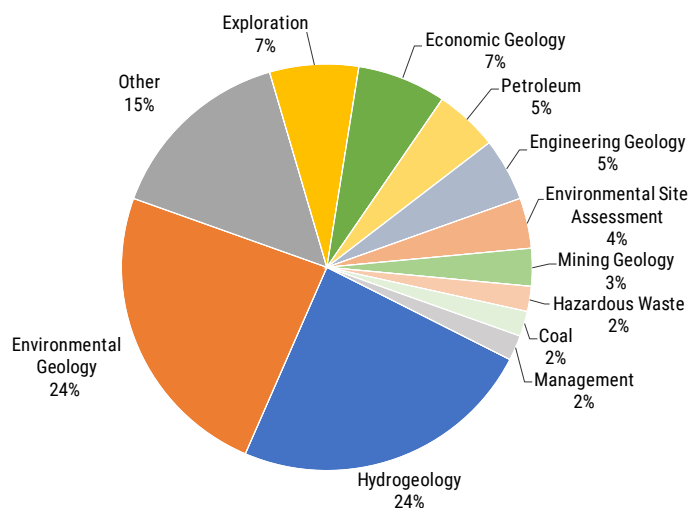


## How do geologists make a living in 2019?

According to recent American Geosciences Institute (AGI) workforce data, less than 11% of geoscience graduates receiving a BA/BS or MA/MS degree develop a career in academia and/or research. Given this statistic, the question then arises: How are geologists making a living upon graduation in 2019? The majority of graduates are developing careers by applying knowledge as opposed to deriving new knowledge as done in academic and/or research positions.

### Areas of expertise for geologists who are members of the American Institute of Professional Geologists

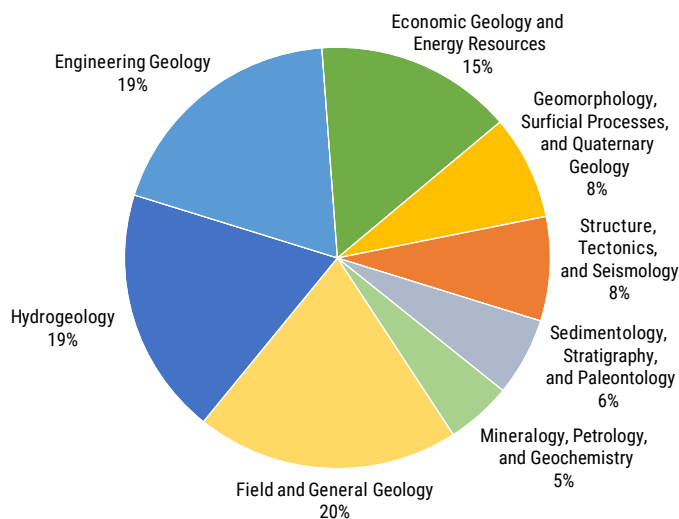


Credit: American Institute of Professional Geologists

Although the most common perception is that geologists look for oil, gas, and coal, the fact is that nearly everything a person touches on a given day, will have required the work of a geologist at some point along the way. Based on workforce surveys conducted by the American Institute of Professional Geologists (AIPG), National Association of State Boards of Geology (ASBOG®), and AGI, geologists are predominantly securing employment in three broad sectors:

- Environmental remediation and management
- Natural resource discovery and utilization
- Engineering and Construction

### ASBOG® Task Analysis Survey Practice of Geology Blueprint - Domain Percentages



Credit: National Association of State Boards of Geology

Geologists working in environmental remediation and management strive to mitigate human impacts. Geologists in this sector respond to spills and accidents, work to clean up sites where past human activities have created negative impacts, and work with companies, municipalities, and individuals to minimize the impacts of new projects. This work requires that geologists conduct field site assessments, using state-of-the-art technology to identify and understand the distribution of contaminants, determine the sources and pathways along which those chemical species move, and develop a mechanism to remove or otherwise mitigate the impact of those species on the environment.

Geologists working in natural resource discovery and utilization are tasked with finding the raw materials to provide the resources necessary to support modern society. Geologists working in this field use cutting edge technology to locate and define specific resources, and to plan for the extraction of those resources. All metals, building stone, as well as coal, oil, and gas, are located by geologists in this sector. As we transition from hydrocarbons to renewable sources of energy, the types of resources these geologists locate will change, but

the work must continue. Every wind turbine, solar panel, and hydroelectric plant requires copper, cobalt, silicon, aggregate, and a vast number of other metals and minerals. As society determines its best way forward, geologists will be there to help find and provide the raw materials that are needed.



**Field photograph of the Emerson Barite Mine.**  
Credit: R. Kath, 2015

Geologists working in engineering and construction work directly with architects and geotechnical/civil engineers to characterize the earth materials upon which new construction projects will be sited. These engineering geologists may also work with geologists in other subdisciplines to help design treatment facilities, retention structures, mine plans, or other structures that are required for geologic projects. Geologists in this field may conduct rock- and soil-strength tests to determine if rocks and other earth materials exhibit the correct properties to be used in the project at hand.



**Trailing gear of TBM, Bellwood Quarry, Atlanta, Georgia.**  
Credit: R. Kath, 2015

While geologists comprise a small percentage of the global workforce, their work extends support to nearly every aspect of modern society. Since less than 11% of graduating BA/BS and MA/MS students work in academia, it is incumbent upon college and university educators to align academic requirements for undergraduate and graduate degree programs with skills that are needed for professionals to hit the ground running in the largest areas of employment for geologists.

*Geologists make use of their special knowledge for the benefit of others. No profession affects the public more than geology. "Civilization exists by geological consent, subject to change without notice"*

*- William Durant*