

Geoscience in Your State: Arizona

INTRODUCTION

Geoscience is a study of the earth and the complex physical, chemical, and biological processes that control life and the economy. Understanding the earth's surface and subsurface, its resources, history, and development is a key to understanding the earth's environment, its history, and its future.



By the numbers: ARIZONA

- 6,703 geoscience employees (excludes self-employed)¹
- 2.76 billion gallons/day groundwater withdrawal²
- 60 billion cubic feet of natural gas production in 2017
- Coal lease bid status: in July 1994, 11 bid and 11 awarded leases (1993-2017)
- 12 million 40-acre parcels in 2017

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Arizona is a state of 15 million people, with a 2017 population of 7.1 million. The state's economy is driven by a mix of industries, including agriculture, manufacturing, and services. The state's natural resources, including its vast reserves of natural gas and oil, are a key part of its economic base. The state's geoscience industry is a critical part of its economic and environmental future.

By the numbers: Arizona

- 6,703 geoscience employees (excludes self-employed)¹
- 2.76 billion gallons/day: total groundwater withdrawal²

- \$6.61 billion: value of nonfuel mineral production in 2017⁴
- 65 total disaster declarations, including 39 fire, 13 flood, and 10 severe storm disasters (1953-2017)⁶
- \$12.8 million: NSF GEO grants awarded in 2017...

Read more in this Geoscience in Your State Factsheet...

Agencies Working on Geoscience Issues in Arizona

Arizona Department of Environmental Quality

<https://azdeq.gov/>

The mission of the Arizona Department of Environmental Quality is to protect and enhance public health and the environment in Arizona. To achieve this, they administer the state's environmental laws and delegated federal programs to prevent air, water and land pollution and ensure cleanup.

Arizona Department of Water Resources

<https://new.azwater.gov/>

The Arizona Department of Water Resources (ADWR) was created to secure long-term dependable water supplies for Arizona's communities. The Department administers and enforces Arizona's groundwater code, and surface water rights laws (except those related to water quality); negotiates with external political entities to protect Arizona's Colorado River water supply; oversees the use of surface and groundwater resources under state jurisdiction; and represents Arizona in discussions of water rights with the federal government. In addition, the Department explores methods of augmenting water supplies to meet future demands, and develops policies that promote conservation and equitable distribution of water. The Department also inspects dams and participates in flood control planning to prevent property damage, personal injury, and loss of life. In support of these activities, ADWR collects and analyzes data on water levels and on water-quality characteristics. Other responsibilities include management of floodplains and non-federal dams to reduce loss of life and damage to property.

Arizona Division of Emergency Management

<https://dema.az.gov/emergency-management>

The Arizona Division of Emergency Management (within the Department of Emergency and Military Affairs) coordinates the State of Arizona's emergency preparedness, response and recovery efforts in order to reduce the impact of emergencies and disaster on people and property in the Whole Community.

Arizona Geological Survey

<https://azgs.arizona.edu/>

The mission of the Arizona Geological Survey is to serve as a primary source of geologic information in the state to enhance public understanding of the state's geologic character, geologic hazards and limitations and mineral resources.

Arizona Oil and Gas Conservation Commission

<http://azogcc.az.gov/>

Maps & Visualizations



Interactive database for geologic maps of the United States

U.S. Geological Survey

The U.S. Geological Survey hosts the National Geologic Map Database (NGMDB). This interactive tool serves as a national archive for high-quality, standardized geologic maps created by the U.S. Geological Survey and state geological surveys. The MapView section of the NGMDB displays geologic maps...

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Case Studies & Factsheets

Screenshot of the USEITI case studies showing the Pima County case study highlighted

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Copper Mining in Pima County, Arizona

The U.S. Department of the Interior's Office of Natural Resources Revenue, Information and Data Management has produced a series of case studies on extractive industries across the United States, focusing on coal, copper, gold, iron, natural gas, and oil.

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Webinars & Forums



Water as One Resource: How interactions between groundwater and surface water impact water availability

This webinar provides an overview of how groundwater and surface water interact, what the implications of these interactions on water resources are, and how water can be more effectively managed if an understanding of these interactions is incorporated.

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