

## Geoscience in Your State: Colorado

## INTRODUCTION

Geoscience is a study of the earth and the processes that shape it, including the physical processes that control the earth and the economy. Understanding the earth's history and evolution, its resources, history, and development is a key to understanding the earth's future and the challenges it faces.



Image of a geological formation in Colorado.

## By the numbers: COLORADO

- 16,763 geoscience employees (excludes self-employed)
- 1.53 billion gallons/day: total groundwater withdrawal
- 10 billion cubic feet of natural gas production in 2017
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## BOULDER COUNTY, COLORADO

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## ADAMS COUNTY, COLORADO

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## WYOMING COUNTY, COLORADO

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Geology of the Colorado Plateau is a study of the earth and the processes that shape it, including the physical processes that control the earth and the economy. Understanding the earth's history and evolution, its resources, history, and development is a key to understanding the earth's future and the challenges it faces.

# By the numbers: Colorado

- 16,763 geoscience employees (excludes self-employed)<sup>1</sup>
- 1.53 billion gallons/day: total groundwater withdrawal<sup>3</sup>

- \$1.68 billion: value of nonfuel mineral production in 2017<sup>4</sup>
- 80 total disaster declarations, including 57 fire, 13 flood, and 3 snow disasters (1953-2017)?
- \$178 million: NSF GEO grants awarded in 2017<sup>14</sup>

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

## Agencies Working on Geoscience Issues in Colorado

### **Colorado Department of Public Health and Environment**

<https://www.colorado.gov/cdphe>

The mission of the Colorado Department of Public Health and Environment is to protect and improve the health of Colorado's people and the quality of its environment

### **Colorado Division of Homeland Security and Emergency Management**

<https://www.colorado.gov/dhsem>

The mission of the Colorado Division of Homeland Security and Emergency Management is to provide leadership and support to Colorado communities to prevent, protect, mitigate, respond and recover from all-hazard events including acts of terrorism.

### **Colorado Division of Reclamation Mining & Safety**

<https://drms.colorado.gov/>

The Colorado Division of Reclamation, Mining and Safety is responsible for mineral and energy development, policy, regulation and planning. The division is comprised of the Office of Mined Land Reclamation and the Office of Active and Inactive Mines.

### **Colorado Division of Water Resources**

<https://dwr.colorado.gov/>

The mission of the Colorado DWR is to provide competent and dependable distribution of water in accordance with statutes, decrees and interstate compacts; to ensure public safety through safe dams and properly permitted and constructed water wells; to maintain and provide accurate and timely information concerning water; to promote stewardship of all human, fiscal and natural resources; to serve the public through the generation of creative solutions to problems; to help the public understand complex water issues; to promote stability in the use of the state's limited water resources; and to apply modern technology to its greatest advantage.

### **Colorado Geological Survey**

<http://coloradogeologicalsurvey.org/>

The mission of the Colorado Geological Survey is building vibrant economies and sustainable communities, free from geologic hazards, for people to live, work and play through good science, collaboration, and sound management of mineral, energy and water resources.

### **Colorado Oil and Gas Conservation Commission**

<https://cogcc.state.co.us/>

The mission of the Colorado Oil and Gas Conservation Commission (COGCC) is to foster the responsible development of Colorado's oil and gas natural resources.

### **Colorado Water Conservation Board**

<https://cwcb.colorado.gov/>

The mission of the Colorado Water Conservation Board is to conserve, develop, protect and manage Colorado's water for present and future generations.

## 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

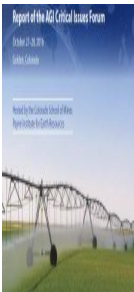


### Groundwater Protection in Oil and Gas Production

Introduction The United States relies on groundwater for roughly 25% of its fresh water.<sup>1</sup> This groundwater is found in porous, permeable rocks (aquifers) that often lie close to the Earth's surface – the deepest freshwater aquifers are found more than 6,000 feet underground,<sup>2</sup> but most are much...

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## Webinars & Forums



### 2016 Critical Issues Forum: Addressing Changes in Regional Groundwater Resources: Lessons from the High Plains Aquifer

The 2016 Critical Issues Forum was a 1-½ day meeting covering multiple aspects of groundwater depletion in the High Plains.

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