

## Geoscience in Your State: North Dakota

## INTRODUCTION

Geoscience is a discipline that is at the intersection of many disciplines, and it plays a crucial role in understanding the earth and the economy. It is a multidisciplinary field that involves the study of the earth's history and the development of resources that are essential for the future of the state.



## By the numbers: NORTH DAKOTA

- 1,810 geoscience employees (excludes self-employed)<sup>1</sup>
- 212 million gallons/day: total groundwater withdrawal<sup>13</sup>
- 2 million acres of land: total production of oil<sup>2</sup>
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- \$72 million: value of nonfuel mineral production in 2017<sup>4</sup>
- 57 total disaster declarations, including 28 flood, 20 snow, and 3 tornado disasters (1953-2017)<sup>6</sup>
- \$636,000: NSF GEO grants awarded in 2017<sup>14</sup>...

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

### Agencies Working on Geoscience Issues in North Dakota

#### **North Dakota Department of Emergency Services**

<https://www.des.nd.gov/>

The NDDES mission is to conduct planning, coordination, communications, and operations for the safety and security of all North Dakota citizens.

#### **North Dakota Department of Environmental Quality**

<https://deq.nd.gov/default.aspx>

The North Dakota Department of Environmental Quality's Vision is for a sustainable, high quality environment for current and future generations. Our Mission is to conserve and protect the quality of North Dakota's air, land and water resources following science and the law.

In cooperation with the general public, industry and government at all levels, the department implements protective programs and standards to help maintain and improve environmental quality.

#### **North Dakota Department of Health**

<https://www.health.nd.gov/>

The mission of the North Dakota Department of Health is to protect and enhance the health and safety of all North Dakotans and the environment in which we live. To accomplish our mission, the North Dakota Department of Health is committed to improving the health status of the people of North Dakota, improving access to and delivery of quality health care, preserving and improving the quality of the environment, promoting a state of emergency readiness and response, and achieving strategic outcomes within available resources.

#### **North Dakota Department of Mineral Resources**

<https://www.dmr.nd.gov/>

The North Dakota Department of Mineral Resources is an agency of the North Dakota Industrial Commission. The Department consists of the North Dakota Geological Survey (including its paleontology program), the Pipeline Authority (established by the state legislature in 2007 to facilitate development of pipeline facilities), and the Oil and Gas Division (which regulates the drilling and production of oil and gas in North Dakota).

#### **North Dakota Geological Survey**

<https://www.dmr.nd.gov/ndgs/>

The North Dakota Geological Survey's mission is to investigate the geology of North Dakota; to administer regulatory programs and act in an advisory capacity to other state agencies; and to provide public service to the people of North Dakota.

#### **North Dakota Public Service Commission**

<https://www.psc.nd.gov/>

The Public Service Commission fulfills its statutory mandates by protecting the public interest and regulating utilities, mining companies, and licensees in a fair, efficient, responsive, and cooperative manner. Regulatory initiatives assure that utility customers receive reliable and safe service at reasonable and just rates; mined coal lands are reclaimed to provide a safe and productive environment now and in the future; and license and permit holders and operators of commercial weighing and measuring devices operate in a safe and fair manner.

#### **North Dakota State Government**

<https://www.nd.gov/>

In addition to the wide variety of agencies working on geoscience issues within the North Dakota State Government, the Hub Explorer provides a large amount of information about geoscience and natural resources in the state.

## 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



### Spills in Oil and Natural Gas Fields

Introduction Oilfield spills can harm wildlife and pose a risk to human health if they reach fresh water sources or contaminate soil or air. The enormous size of the oil and gas industry and the huge volumes of oil and produced water that are handled, stored, and transported result in thousands of...

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## Webinars & Forums



### Making Produced Water More Productive

Geoscience is essential to our understanding and management of produced water, an inevitable by-product of oil and gas development. This Critical Issues webinar provides a scientific and regulatory background of produced water, how it is commonly disposed, what opportunities exist for the re-use...

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