Water

Water is essential for society and, as demand steadily rises, our most precious commodity. Geoscientists study how to provide a clean and secure water source to meet society's needs.

Frequently Asked Questions

How does 3D geologic mapping benefit society?
Alberta Geological Survey
What is groundwater used for?
American Geosciences Institute
What is produced water?
American Geosciences Institute
Which areas in the United States are most dependent on groundwater?
American Geosciences Institute
Can floods be predicted?
U.S. Geological Survey

Do you have a question that's not listed here? Search all FAQs

Explore Related Topics

Drought
Since 1980 the United States has experienced more than 24 major droughts, resulting in almost 3,000 deaths and economic impacts exceeding $225 billion. All areas of the U.S. have some drought risk.

Flooding
Flooding is the most common and costliest natural hazard facing the United States. Each year, flooding causes billions of dollars in damages and dozens of deaths nationwide.
Groundwater
Groundwater is the water found underground in the cracks and spaces in soil, sand, and rock. Groundwater has been used by humans for thousands of years; today it provides 25% of the fresh water used in the United States, mostly for irrigation and public water supplies.

Water Availability
Water is constantly moving on the Earth between the atmosphere, ocean, rivers and streams, snowpacks and ice sheets, and underground. Water availability, both as surface water and groundwater, is essential for agriculture, human consumption, industry, and energy generation.

Water Quality
Water quality refers to whether water is suitable for a certain purpose, like drinking or irrigation. Both natural and man-made factors can affect water quality. Contaminants can include bacteria, metals, and man-made chemicals like pesticides or pharmaceutical drugs.

Wildfires
Wildfires are causing more frequent and wider-ranging societal impacts, especially as residential communities continue to expand into wildland areas. Since 2000, there have been twelve wildfires in the United States that have each caused damages exceeding $1 billion; cumulatively, these twelve wildfires have caused a total of $44 billion in damages.

Latest News
House subcommittee meets to discuss ocean acidification bills
(2019-04-12)
April 9, 2019 The Subcommittee on Environment of the House Science Committee met on April 9 to discuss four bills to address ocean acidification: the National Estuaries and Acidification Research (NEAR) Act of 2019 (H.R.988), COAST Research Act of 2019 (H.R.1237), Coastal Communities Ocean...
Interactive map of New England current water conditions
U.S. Geological Survey

The U.S. Geological Survey's New England Water Science Center hosts an interactive map that displays current water conditions for each state in New England. The map has real-time, geolocated water data for New England, including: Surface water levels, including streamflow conditions. Ground...

Search all Maps & Visualizations

Case Studies & Factsheets

Groundwater Protection in Oil and Gas Production
Introduction The United States relies on groundwater for roughly 25% of its fresh water. 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, but most are much...

Search all Case Studies & Factsheets

Webinars & Forums

Mapping Displacement and Subsidence with Time-series Radar
2020-04-15
In this webinar, experts from Hexagon and the Arizona Department of Water Resources will discuss the use of time-series displacement maps with a high point density for monitoring and mitigating subsidence due to subsurface extraction of resources such as water or hydrocarbons.

Search all Webinars & Forums
GOLI Online Courses

Converting Membrane Interface Probe Sensor Results into VOC NAPL Distribution Information
Course Type: GOLI Online Course
View course
This course will focus on how to use Membrane Interface Probe sensor results in combination with soil and groundwater analytical results to map the distribution of volatile organic chemical non aqueous phase liquids. This course covers guidelines for using direct sensing tools such as the MIHPT...

Search all GOLI courses

Geological Surveys Database Publications

Water, water everywhere...
1997, Maine Geological Survey

Search all publications