

# UTAH GEOLOGICAL SURVEY

**CHARACTERIZE**  
energy and mineral resources

**MONITOR**  
the state's paleontological sites

**EVALUATE**  
Utah's groundwater resources

**MAP**  
the state's geology

**DISTRIBUTE**  
geologic information

**IDENTIFY**  
geologic hazards

**PROVIDE**  
assistance to government  
agencies, educators, the  
public, industry, and business



**DEPARTMENT OF NATURAL RESOURCES**

# GEOLOGIC MAPPING

Maps the geology of the state at 1:100,000 and 1:24,000 scales and produces both print and digital (Geographic Information System) maps that describe:

- stratigraphy
- structure
- bedrock and Quaternary (surficial) geology
- geologic hazards
- economic geology
- groundwater resources
- scenic geologic resources



Provides geologic maps to geologists, government officials, industry representatives, and the public to promote better understanding of Utah's geology, delineate the resource potential of property, and assess geologic hazards.

# GROUNDWATER

Conducts detailed studies on groundwater resources:

- groundwater contamination evaluation
- geological framework of aquifers and hydrologic basins
- geophysical logging of water wells
- water-well siting
- wetlands evaluation
- water-well cutting analysis
- groundwater modeling



# GEOLOGIC INFORMATION & OUTREACH

Answers questions and provides information and resources on Utah's geology to the public, educators, industry, business, media, and decision makers. Produces non-technical, geologic-overview, and educational publications on a variety of topics, including:

- geologic guides to various areas of the state (selected roads, state parks, travel regions, and points of interest)
- geologic hazards
- geologic resources
- science curriculum topics

Operates the Natural Resources Map & Bookstore and the Department of Natural Resources Library. Maintains the UGS and Map & Bookstore websites. Provides education/geologic resources, field trips, and workshops to teachers.



## PALEONTOLOGY

Conducts detailed studies on paleontological resources and provides:

- fossil recovery
- paleontological locality database
- fossil analysis
- selected permits for fossil excavations
- paleontological training program for amateurs through Utah Friends of Paleontology



# ENERGY AND MINERALS

Contributes to Utah's economic development by identifying, characterizing, and quantifying Utah's energy and mineral resources. Resources include:

- industrial, base, and precious metals
- uranium and vanadium
- geothermal
- coal and coalbed gas
- tar sands and oil shale
- oil and gas
- carbon dioxide storage reservoirs

Operates the Utah Core Research Center; maintains computerized databases and other files on Utah's past and present resource development activities to respond to requests for information about the state's energy and mineral resources from individuals, governmental agencies, and industry.



# GEOLOGIC HAZARDS

Helps protect Utah's public health, safety, and property by identifying and investigating geologic hazards; provides state and local governments and the public with information and technical services; develops small- and large-scale geologic-hazard maps; and performs detailed studies of geologic hazards, including:

- earthquakes
- liquefaction
- landslides, including debris flows and rock falls
- land subsidence
- ground fissures
- problem soils (collapsible soils, expansive soils, etc.)
- shallow groundwater
- radon



## **PUBLIC INQUIRY**

Answer questions on Utah geology by responding to walk-in visitors, letters, telephone calls, and emails.

## **UGS WEBSITE**

Provide online publications and maps; databases and data downloads; geologic hazards; energy resources, energy and mineral statistics; groundwater monitoring; rock and mineral collecting sites, dinosaurs and fossils; information on the programs and activities of the UGS.

## **UTAH CORE RESEARCH CENTER**

Provide facilities to archive and examine borehole cuttings, core, type oils, coals, and selected surface rock samples from Utah; conduct workshops, tours, and core slabbing and photographing. Call for appointments or information (801-537-3359).

## **DNR LIBRARY**

Maintain numerous reference materials on Utah's natural resources, including maps, publications, and theses/dissertations from the UGS, U.S. Geological Survey (USGS), state academic institutions, and professional geologic organizations; provide public-access digital data including geologic map and hazards bibliographies. Available to the public for research. Open Mon-Fri, 8:00 a.m. to 4:30 p.m.

## **NATURAL RESOURCES MAP & BOOKSTORE**

Provide large selection of publications and maps on Utah geology from the UGS, USGS, Utah Geological Association; recreational maps and books for Utah and surrounding areas; complete inventory of USGS topographic maps of Utah. Open Mon-Fri, 8:00 a.m. to 5:00 p.m. Shop online at [mapstore.utah.gov](http://mapstore.utah.gov).

## **GEOLOGIC HAZARDS ASSISTANCE**

Advise state and local governments on geologic hazard emergencies, prepare hazards maps, delineate special study areas, and review consultants' geologic hazards reports for school districts.

## **SURVEY NOTES**

Publish informative, non-technical magazine three times a year on important and interesting geologic topics in Utah; highlights current developments and completed research, energy news, significant finds, projects and partnerships.

## **GROUNDWATER RESOURCE & ENVIRONMENTAL EVALUATIONS**

Evaluate the quantity and quality of Utah's wetlands and groundwater resources; protect drinking-water supplies; investigate environmental impacts of septic tank soil-absorption systems for local governments and state agencies.

## **PALEONTOLOGICAL SERVICES**

Interpret and inventory paleontological sites; recover fossils; issue permits for fossil excavations to qualified professionals; assist and/or partner with other agencies.

## **INDUSTRY OUTREACH**

Maintain contact and exchange information with mining and petroleum operators, promote exploration and development opportunities, and respond to technical industry inquiries.

## **INDUSTRY COOPERATIVES**

Oversee joint cooperative research with industry; projects include developing geological and petrophysical characterizations of oil and gas reservoirs, increasing gas and oil production, and reactivating idle oil leases in Utah.

## **ENERGY AND MINERAL RESOURCE EVALUATIONS**

Investigate the energy and mineral resources of counties, sovereign land tracts, and school trust lands for county governments and state agencies.

## **TEACHER WORKSHOPS (PROFESSIONAL DEVELOPMENT)**

Instruct teachers on grade-specific subject content aligned directly to the Core; includes field trip and hands-on activities. Available for re-licensure points, as well as for university or USOE credit.

## **TEACHING KITS**

Loan out four different teaching kits (\$50-\$100 refundable deposit): rock/mineral/fossil; dinosaurs; landforms; and Ice Age. Stream tables and other geologic models are also available for loan.

## **EARTH SCIENCE WEEK**

Host annual hands-on geoscience activities in October for elementary school groups. Teachers call for reservations (801-537-3300).

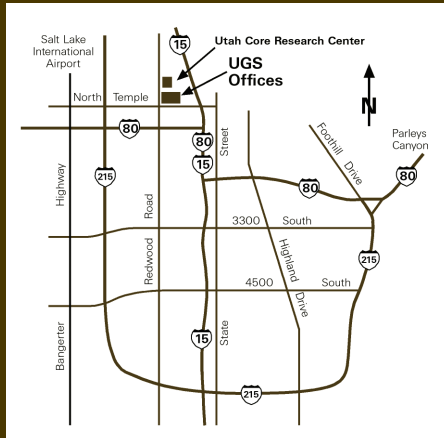
# UTAH GEOLOGICAL SURVEY



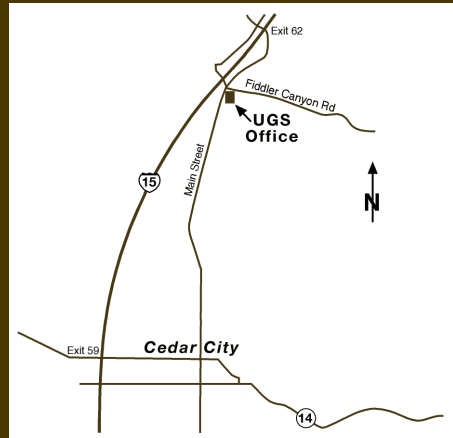
The Utah Geological Survey provides timely scientific information about Utah's geologic environment, resources, and hazards.



## SALT LAKE CITY OFFICE



## CEDAR CITY OFFICE



If you have any questions or need additional information, please contact us:

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NATURAL RESOURCES MAP & BOOKSTORE  
Phone: (801) 537-3320  
Toll free: (888) UTAH MAP  
Fax: (801) 537-3395  
[mapstore.utah.gov](http://mapstore.utah.gov)

UTAH CORE RESEARCH CENTER  
240 North Redwood Road  
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Phone: (801) 537-3359  
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[geology.utah.gov/ugssuro.htm](http://geology.utah.gov/ugssuro.htm)

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