

Wyoming State Geological Survey

Wyoming State Geological Survey – providing excellence in the application of geology and the creation of public awareness of the importance of geoscience for society

Research

The WSGS areas of research include:

- **Energy resources.** Geologists conduct research and produce reports and maps on Wyoming coal, oil, natural gas, and uranium resources.
- **Gems and minerals.** Geologists collect specimens and study commercial deposits and mineral and rock occurrences in Wyoming.
- **Water resources.** Hydrogeologists assess groundwater productivity and conduct geologic studies of water resources.
- **Geologic Hazards.** Geologists track, study, and map earthquakes, landslides, and other geologic hazards throughout the state.

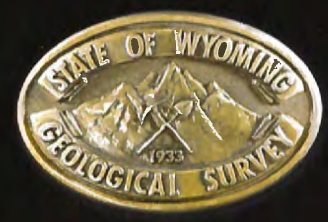
Public Outreach

WSGS outreach efforts are intended to create public awareness of Wyoming's geologic and energy resources, while providing the public with opportunities to learn about the state's geologic history, rocks, minerals, and fossils.

WSGS public outreach includes:

- WSGS geologists presenting at energy and geology conferences and guiding geologic field trips.
- *Wyoming Geology Extra*, a roadway interpretive program, with signs at key geologic sites in the state.
- Annual Summary Reports on Wyoming's key resources.
- The WSGS content-driven website, interactive online maps, quarterly e-newsletter, *Geo-Notes*, news releases, videos, and weekly social media posts via Facebook and Twitter.

Interpreting the past, providing for the future



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Located on the UW campus
Laramie, Wyoming

www.wsgs.uwyo.edu

Logon to our Online Store to purchase and download free publications and maps.



Our products result from geologic investigations, extensive fieldwork, and mapping efforts. The knowledge we provide through our website, reports, publications, and maps enables Wyoming's residents, land managers, decision makers, planners, researchers, and industry leaders to work together toward responsible resource development. We also collaborate on research with state and federal management agencies and the University of Wyoming.

Major Research Projects

- **New mineral investigations.** WSGS received funding from the Wyoming Legislature to study several mineral resources, including rare earth elements (a continuation of a recent study), zeolites, lithium, and iron. These studies will include final reports provided to the state Legislature in 2016.
- **Wyoming Oil and Gas Development Map.** The WSGS maintains an interactive map on its website for identifying areas in Wyoming where oil and natural gas projects are slated for development and viewed through Google Earth.
- **Karst research project.** Geologists are studying karst subsidence hazards (including sink holes) in the Laramie Basin, with a report slated for 2015.
- **Fort Union study.** Geologists are researching the Fort Union Formation for potential mineable coal deposits as well as oil and gas traps for exploration.
- **Powder River Basin groundwater monitoring study.** WSGS continues to compile Bureau of Land Management data for evaluating the effects of coalbed natural gas production on the groundwater resources in the Powder River Basin.
- **STATEMAP.** A project under the USGS, geologists of the WSGS are conducting field work for developing and publishing its annual maps on Wyoming geology – maps illustrating rocks and deposits found on the surface as well as bedrock geology for specific regional areas. These maps also support the agency's larger projects related to the research divisions of the WSGS.
- **Coal geology of Wyoming's coal basins.** For the National Coal Resource Data System, WSGS geologists are gathering stratigraphic coal data from coal exploration and coalbed methane wells in each Wyoming basin with active coal mining, a project funded by the USGS.