

What is NBMG?

- The Nevada Bureau of Mines and Geology is the state geological survey of Nevada, whose mission is to provide the citizens of Nevada with geological information that is critical to public safety, economic development, and improving the quality of life throughout Nevada.
- NBMG is a statewide public service unit at the University of Nevada, Reno (UNR) within the Nevada System of Higher Education. NBMG is a part of the Mackay School of Earth Sciences and Engineering within the College of Science.
- NBMG scientists conduct research and publish reports on mineral, geothermal, and oil and gas resources, engineering geology, environmental geology, hydrogeology, geologic mapping, and Nevada's overall geologic framework.

NBMG and Nevada

The Nevada Bureau of Mines and Geology is responsible for understanding Nevada's geology and landscapes, assessing its natural resources, and analyzing its earthquake potential and other natural hazards.

Every state has a geological survey, with 1/3 of them residing at a major university. The relationship with UNR allows NBMG to be intimately involved in cutting edge research and educating the next generation of geoscience experts.

NBMG is a statewide agency that applies its expertise to all corners of the state, including the city of Las Vegas in the south, the major gold resources of the northeast, and the earthquake hazards and geothermal resources of the west and northwest within and near the Reno–Carson City urban corridor. NBMG is relevant to nearly every Nevada citizen, working to make Nevada a safer and more attractive home for its people and industries.

Nevada has more mountain ranges, gold, and geothermal resources than any other state. It has some of the largest gold deposits in the world, and its vast geothermal potential could one day be harnessed to produce enormous quantities of electricity.

Geologic Setting

Nevada owes its unique setting to its location within the Pacific–North American plate boundary, where tectonic stresses drive crustal blocks to slide past one another along major faults (akin and related to the San Andreas Fault in California) and also to extend or stretch in the horizontal dimension. These motions make Nevada literally the fastest-growing state in the country, as the stretching adds new land at the rate of two acres every decade! All of this activity makes Nevada the third most seismically active state after California and Alaska, with a number of large magnitude 7 earthquakes rocking the state in the recent past.

Planning & Urban Development

NBMG scientists conduct extensive geologic mapping in Nevada.

Geologic mapping in urban settings helps planners consider geologic hazards as they plan and design infrastructure and development.

Studies show that geologic maps save developers and engineers about \$50,000 for every construction project. Many different companies utilize the same map, which greatly multiplies the cost savings and value of any particular map. NBMG has produced thousands of geologic maps, but 80% of Nevada still lacks adequate, modern geologic maps.

Nevada is a geologically complex, resource-rich state that requires a diverse and well-staffed geological survey to continue resource assessments and geologic mapping.

NBMG and Nevada Mineral Resources

NBMG carries out resource assessments over the vast amount of federal lands that cover 87% of Nevada. Such assessments allow land managers to make the wisest decisions about land use.

Nevada is one of the leading gold producers in the world. NBMG publications were important in the discoveries that led to the current gold boom and a \$9 billion per year industry.

NBMG research, maps, and databases all greatly assist companies in discovering new mines and creating jobs and can play a vital role in helping companies discover increasingly difficult-to-find mineral deposits.