Geoscience in Nevada

WHAT IS GEOSCIENCE?
Geoscience is the study of the Earth and the complex geologic, marine, atmospheric, and hydrologic processes that sustain life and the economy. Understanding the Earth’s surface and subsurface, its resources, history, and hazards allows us to develop solutions to critical economic, environmental, health, and safety challenges.

By the numbers: NEVADA
• 3,819 geoscience employees (excludes self-employed)¹
• 1.44 billion gallons/day: total groundwater withdrawal³
• $8.68 billion: value of nonfuel mineral production in 2017⁴
• 68 total disaster declarations, including 47 fire, 11 flood, and 5 severe storm disasters (1953-2017)⁶
• $2.04 million: NSF GEO grants awarded in Nevada in 2017¹⁴

ENERGY AND MINERALS IN NEVADA
• $8.68 billion: value of nonfuel mineral production in 2017⁴
• Gold, copper, crushed stone: top three nonfuel minerals in order of value produced in 2017⁴
• 1.79 million megawatt hours: hydroelectricity produced in 2017³
• 3.37 million megawatt hours: geothermal produced in 2017⁵
• 3.84 million megawatt hours: solar produced in 2017⁵

WATER USE IN NEVADA
• 1.44 billion gallons/day: total groundwater withdrawal³
• 1.52 billion gallons/day: total surface water withdrawal³
• 531 million gallons/day: public supply water withdrawal³
• 2.07 billion gallons/day: water withdrawal for irrigation³
• 6 million gallons/day: industrial fresh water withdrawal³
• 93% of the population is served by public water supplies³

NATURAL HAZARDS IN NEVADA
• 68 total disaster declarations, including 47 fire, 11 flood, and 5 severe storm disasters (1953-2017)⁶
• $2 million: individual assistance grants (2005-2017)⁶
• $17 million: mitigation grants (2005-2017)⁶
• $219 million: preparedness grants (2005-2017)⁶
• $20 million: public assistance grants (2005-2017)⁶
• 17 weather and/or climate events, each with costs exceeding $1 billion (inflation adjusted) (1980-2017)⁷

⁴ U.S. Geological Survey, Mineral Commodity Summaries 2018
⁵ U.S. Energy Information Administration
⁶ FEMA Data Visualization: Summary of Disaster Declarations and Grants (accessed May 2, 2018)

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https://www.americangeosciences.org/policy/factsheet/states | govt@americangeosciences.org
U.S. GEOLOGICAL SURVEY (USGS)
- $1.15 billion: total USGS budget in FY 2018 (5.8% increase from FY 2017)\(^8\)
- The National Cooperative Geologic Mapping Program funds geologic mapping projects with federal (FEDMAP), state (STATEMAP), and university (EDMAP) partners
- $3.66 million: Nevada STATEMAP funding (1993-2016)\(^9\)
- University of Nevada, Las Vegas and University of Nevada, Reno have participated in EDMAP\(^9\)
- USGS streamgages collect real-time or recent streamflow, groundwater, and water-quality data throughout Nevada

NATIONAL SCIENCE FOUNDATION (NSF)
- $7.8 billion: total NSF budget in FY 2018 (4% increase from FY 2017)\(^13\)
- $1.4 billion: total NSF Geosciences Directorate (GEO) awards in FY 2017 (7.2% increase from FY 2016)\(^14\)
- 17 NSF GEO awards in Nevada totaling $2.04 million in 2017\(^14\)
- $902,000: NSF GEO grants awarded to Nevada System of Higher Education, Desert Research Institute in 2017\(^14\)

U.S. GEOLOGICAL SURVEY (USGS)
- $3.66 million: Nevada STATEMAP funding (1993-2016)\(^9\)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)
- $20.7 billion: total NASA budget in FY 2018 (5.5% increase from FY 2017)\(^10\)
- $1.9 billion: total NASA Earth Science budget in FY 2018 (0% change from FY 2017)\(^10\)
- Gravity Recovery and Climate Experiment (GRACE) satellites measure groundwater changes in Nevada
- Soil Moisture Active Passive (SMAP) satellite measures soil moisture in Nevada

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)
- $8.1 billion: total EPA budget in FY 2018 (0% change from FY 2017)\(^15\)
- 1 active Superfund site in Nevada in 2018\(^16\)
- $11.8 million: value of Drinking Water State Revolving Fund (DWSRF) grants in Nevada in 2017\(^17\)

FEDERAL FACILITIES IN NEVADA
- USGS Nevada Water Science Center, Carson City
- USGS Western Ecological Research Center Field Station, Henderson
- USDA Forest Service Reno Great Basin Ecology Laboratory, Reno

YOUR STATE SOURCE FOR GEOSCIENCE INFORMATION
Nevada Bureau of Mines and Geology
Mail Stop 178
University of Nevada
Reno, NV 89557
http://www.nbmg.unr.edu/
775-784-6691

8 U.S. Department of the Interior, FY 2019 Budget in Brief
9 U.S. Geological Survey, National Cooperative Geologic Mapping Program
10 National Aeronautics and Space Administration, FY 2019 Budget Estimates
11 National Oceanic and Atmospheric Administration, FY 2019 Bluebook
12 NOAA In Your State and Territory
13 U.S. House of Representatives, FY 2018 Omnibus Spending Bill (Division B) – Commerce, Justice, Science, and Related Agencies Appropriations Act, 2018
14 National Science Foundation, Budget Information System
15 U.S. House of Representatives, FY 2018 Omnibus Spending Bill (Division G) – Department of the Interior, Environment, and Related Agencies Appropriations Act, 2018
16 U.S. Environmental Protection Agency, Superfund Sites
17 U.S. Environmental Protection Agency, Drinking Water State Revolving Fund National Information Management System Reports