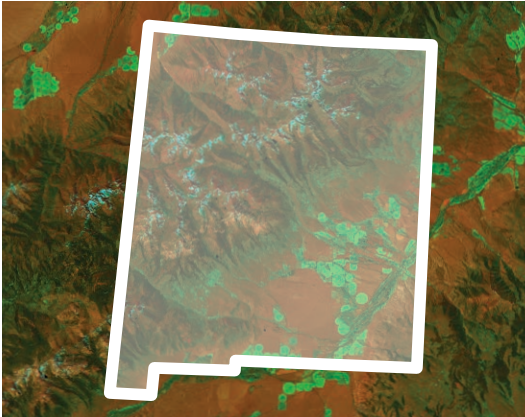


## WHAT IS GEOSCIENCE?

Geoscientists study the Earth's systems — the complex geologic, marine, atmospheric, and hydrologic processes that sustain life and the economy. Geoscience expertise enables us to develop solutions to critical economic, environmental, health, and safety challenges.



Satellite image: NASA/USGS Landsat Program. State outline: Matt Battison.

## WORKFORCE IN NEW MEXICO

- 4,140: **geoscience employees** (non-federal/self-employed) in 2015<sup>1</sup>
- \$78,400: average median geoscience employee salary<sup>1</sup>
- 25,500: **jobs** in extractive industries in 2015<sup>2</sup>
- 16: academic geoscience departments<sup>3</sup>

## WATER IN NEW MEXICO

- 1.6 billion gallons/day: total groundwater withdrawal<sup>4</sup>
- 1.6 billion gallons/day: total surface water withdrawal<sup>4</sup>
- 280 million gallons/day: public supply water withdrawal<sup>4</sup>
- 2.7 billion gallons/day: water withdrawal for irrigation<sup>4</sup>
- 11 million gallons/day: self-supplied industrial fresh water withdrawal<sup>4</sup>
- 85% of the population is served by public water supplies<sup>4</sup>
- 14 counties in 2015 designated as primary natural disaster areas caused by drought<sup>5</sup>
- 74 USGS stream gages in New Mexico<sup>6</sup>

1 Data Derived from Bureau of Labor Statistics *Occupational Employment Statistics (2015)*

2 U.S. DOI *Extractive Industries Transparency Initiative*

3 American Geosciences Institute *Directory of Geoscience Departments (2016)*

4 USGS *Estimated Use of Water in the United States in 2010*

5 USDA Farm Service Agency *Disaster Designation Information (2015 Crop Year)*

6 USGS WaterWatch *Total Streamgage Stations (March 10, 2017)*

## By the numbers: NEW MEXICO

- \$1.46 billion: value of nonfuel mineral production in 2016<sup>7</sup>
- 4,140: **geoscience employees** (non-federal/self-employed)<sup>1</sup>
- 25,500: **jobs** in extractive industries in 2015<sup>2</sup>
- 18 flooding disaster declarations since 1953<sup>8</sup>
- \$51.9 million: NSF grants awarded in New Mexico in 2016<sup>18</sup>
- \$10.1 million: NSF GEO grants awarded in New Mexico in 2016<sup>18</sup>

## ENERGY AND MINERALS PRODUCTION IN NEW MEXICO

- \$1.46 billion: value of nonfuel mineral production in 2016<sup>7</sup>
- 147 million barrels: crude oil produced in 2015<sup>2</sup>
- 1.3 trillion cubic feet: natural gas produced in 2015<sup>2</sup>
- 22 million short tons: coal produced in 2014<sup>2</sup>
- 2 million megawatt hours: wind power produced in 2015<sup>2</sup>
- 122,600 megawatt hours: hydroelectricity produced in 2015<sup>2</sup>
- 646,000 megawatt hours: solar power produced in 2015<sup>2</sup>
- 13,300 megawatt hours of geothermal energy produced in 2015<sup>2</sup>

## NATURAL HAZARDS IN NEW MEXICO

### FEMA statistics for New Mexico

- 12 severe storm disaster declarations since 1953<sup>8</sup>
- 18 flooding disaster declarations since 1953<sup>8</sup>
- 49 fire disaster declarations since 1953<sup>8</sup>
- \$3 million: individual assistance grants since 2005<sup>8</sup>
- \$253 million: mitigation grants since 2005<sup>8</sup>
- \$153 million: preparedness grants since 2005<sup>8</sup>
- \$257 million: public assistance grants since 2005<sup>8</sup>
- 20 weather and/or climate events, each with costs exceeding \$1 billion (inflation adjusted) 1980-2016<sup>9</sup>

7 USGS *Mineral Commodity Summaries (2017)*

8 FEMA *Summary of Disaster Declarations and Grants (2016)*

9 NOAA *Billion-Dollar Weather and Climate Disasters: Mapping*

AGI is a network of 51 member societies, representing more than 250,000 geoscientists.

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## U.S. GEOLOGICAL SURVEY (USGS) GEOLOGIC MAPPING

- \$1.06 billion: total USGS budget; 1.6% up from FY 2015<sup>10</sup>
- The USGS National Cooperative Geologic Mapping Program (NCGMP) funds geologic mapping projects by states (STATEMAP) and universities (EDMAP)
- \$4,550,000: New Mexico STATEMAP funding (1993-2016)<sup>11</sup>
- 186 geologic maps in New Mexico created with STATEMAP support (1993-2010)<sup>11</sup>
- 13,020 square miles in New Mexico mapped through STATEMAP (1993-2010)<sup>11</sup>
- University of New Mexico, New Mexico State University participated in EDMAP<sup>11</sup>

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## NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

- \$5.6 billion: total NASA Science budget; 6.6% up from FY 2015<sup>12</sup>
- \$1.9 billion: total NASA Earth Science budget; 7.7% up from FY 2015<sup>13</sup>
- GRACE satellites measure groundwater changes in all of New Mexico<sup>14</sup>
- SMAP satellite measures soil moisture in all of New Mexico<sup>14</sup>

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## NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

- \$5.8 billion: total NOAA budget; 5.9% up from FY 2015<sup>15</sup>
- GOES satellites provide state-of-the-art weather forecasting over New Mexico<sup>16</sup>
- DISCOVER satellite monitors radiation and air quality over New Mexico<sup>16</sup>
- 14 National Weather Service observing stations in New Mexico<sup>17</sup>

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<sup>10</sup> DOI Budget and Performance

<sup>11</sup> USGS National Cooperative Geologic Mapping Program

<sup>12</sup> NASA Budget Documents, Strategic Plans and Performance Reports

<sup>13</sup> American Institute of Physics FY2016 Appropriations

<sup>14</sup> Gravity Recovery and Climate Experiment (GRACE); Soil Moisture Active Passive (SMAP)

<sup>15</sup> NOAA Total Budget

<sup>16</sup> Geostationary Operational Environmental Satellite (GOES) & Deep Space Climate Observatory (DISCOVER)

<sup>17</sup> NOAA in Your State

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## NATIONAL SCIENCE FOUNDATION (NSF)

- \$7.46 billion: total NSF budget; 1.6% up from FY 2015<sup>18</sup>
- \$1.28 billion: total NSF Geosciences Directorate (GEO) awards; 1.6% up from FY 2015<sup>18</sup>
- 172 NSF grants in New Mexico totaling \$51.9 million in 2016<sup>18</sup>
- 35 NSF GEO grants in New Mexico totaling \$10.1 million in 2016<sup>18</sup>
- \$7 million: NSF GEO grants to University of New Mexico in 2016<sup>18</sup>
- \$1.8 million: NSF GEO grants to New Mexico Institute of Mining and Technology in 2016<sup>18</sup>

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## U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

- \$8.14 billion: total EPA budget; 0% up from FY 2015<sup>19</sup>
- 20 active/proposed superfund sites<sup>20</sup>
- \$189 million: cumulative federal grants for Drinking Water State Revolving Fund (DWSRF) in New Mexico (1997-2016)<sup>21</sup>
- \$7.9 million: annual value of federal DWSRF grants in New Mexico in 2016<sup>21</sup>

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## MAJOR FEDERAL FACILITIES IN NEW MEXICO

- USGS New Mexico Water Science Center, Albuquerque
- USGS New Mexico Landscapes Field Station, Los Alamos
- USGS Carlsbad Field Headquarters, Carlsbad
- NASA White Sands Test Facility, Las Cruces
- DOE Sandia National Lab, Albuquerque
- DOE Los Alamos National Lab, Los Alamos

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## YOUR STATE SOURCE FOR GEOSCIENCE INFORMATION

### New Mexico Bureau of Geology and Mineral Resources

801 Leroy Place  
Socorro, NM 87801-4796

<http://geoinfo.nmt.edu/>  
(575) 835-5490

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<sup>18</sup> NSF Budget Internet Information System

<sup>19</sup> EPA Budget and Spending

<sup>20</sup> EPA Search for Superfund Sites Where You Live (March 2017)

<sup>21</sup> EPA Drinking Water State Revolving Fund National Information Management System Reports

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AGI's Geoscience Policy and Critical Issues programs support well-informed public policy and decision making by providing information and facilitating dialogue between the geoscience community and decision makers at all levels.

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