

## Policy Publications

### Policy Monthly Review



The Monthly Review and other special updates keep Member Societies informed of Geoscience Policy activities and related events in Washington, D.C. They are sent out by electronic mail to Member Society leadership; public affairs committees; AGI's Executive Committee, Member Society Council, Geoscience Policy Committee; and other interested geoscientists.

### Policy Annual Review



The Geoscience Policy Annual Review provides an in-depth summary of the major developments in federal geoscience policy over the year, including synthesis of legislative, budgetary, and administrative actions across geoscience topics.

### Factsheets

#### 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: FLORIDA

- 13,696 geoscience employees (non-federal/self-employed)<sup>1</sup>
- 3.77 billion gallons/day: total groundwater withdrawal<sup>2</sup>
- \$3.15 billion: value of nonfuel mineral production in 2017<sup>3</sup>
- 122 total disaster declarations, including 42 fire, 34 hurricane, and 22 severe storm disasters (1953-2017)<sup>4</sup>
- \$19.6 million: NSF GEO grants awarded in 2017<sup>5</sup>

#### ENERGY AND MINERALS IN FLORIDA

- \$3.15 billion: value of nonfuel mineral production in 2017<sup>3</sup>
- Phosphate rock, stone (limestone), cement (portland): top three nonfuel minerals in order of value produced in 2017<sup>3</sup>
- 1.92 million barrels: crude oil produced in 2017<sup>6</sup>
- 470,000 megawatt hours: solar produced in 2017<sup>7</sup>
- 2.31 million megawatt hours: wood-derived fuels produced in 2017<sup>8</sup>
- 2.63 million megawatt hours: other biomass produced in 2017<sup>9</sup>

#### WORKFORCE IN FLORIDA

- 13,696 geoscience employees (non-federal/self-employed) in 2017<sup>1</sup>
- \$62,257: average median geoscience employee salary<sup>10</sup>
- 17 academic geoscience departments<sup>11</sup>

#### WATER USE IN FLORIDA

- 3.77 billion gallons/day: total groundwater withdrawal<sup>2</sup>
- 11.5 billion gallons/day: total surface water withdrawal<sup>12</sup>
- 2.18 billion gallons/day: public supply water withdrawal<sup>13</sup>
- 2.45 billion gallons/day: water withdrawal for irrigation<sup>14</sup>
- 245 million gallons/day: self-supplied industrial fresh water withdrawal<sup>15</sup>
- 88% of the population is served by public water supplies<sup>16</sup>

#### NATURAL HAZARDS IN FLORIDA

- 122 total disaster declarations, including 42 fire, 34 hurricane, and 22 severe storm disasters (1953-2017)<sup>4</sup>
- \$486 million: individual assistance grants (2005-2017)<sup>17</sup>
- \$586 million: mitigation grants (2005-2017)<sup>18</sup>
- \$1 billion: preparedness grants (2005-2017)<sup>19</sup>
- \$2.28 billion: public assistance grants (2005-2017)<sup>20</sup>
- \$3 weather and/or climate events, each with costs exceeding \$1 billion inflation adjusted (1980-2017)<sup>21</sup>

<sup>1</sup> U.S. Bureau of Labor Statistics, Occupational Employment Statistics, May 2017  
<sup>2</sup> U.S. Geological Survey, National Water Resources Institute, National Water Resources Institute, National Water Resources Institute, National Water Resources Institute  
<sup>3</sup> U.S. Geological Survey, Mineral Resources Data Service, Mineral Resources Data Service, Mineral Resources Data Service, Mineral Resources Data Service  
<sup>4</sup> U.S. Geological Survey, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information  
<sup>5</sup> U.S. Geological Survey, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information  
<sup>6</sup> U.S. Geological Survey, Mineral Resources Data Service, Mineral Resources Data Service, Mineral Resources Data Service, Mineral Resources Data Service  
<sup>7</sup> U.S. Department of Energy, Energy Information Administration, Energy Information Administration, Energy Information Administration, Energy Information Administration  
<sup>8</sup> U.S. Department of Energy, Energy Information Administration, Energy Information Administration, Energy Information Administration, Energy Information Administration  
<sup>9</sup> U.S. Department of Energy, Energy Information Administration, Energy Information Administration, Energy Information Administration, Energy Information Administration  
<sup>10</sup> U.S. Bureau of Labor Statistics, Occupational Employment Statistics, May 2017  
<sup>11</sup> U.S. Geological Survey, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information  
<sup>12</sup> U.S. Geological Survey, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information  
<sup>13</sup> U.S. Geological Survey, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information  
<sup>14</sup> U.S. Geological Survey, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information  
<sup>15</sup> U.S. Geological Survey, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information  
<sup>16</sup> U.S. Geological Survey, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information, National Center for Earthquake Information  
<sup>17</sup> U.S. Department of Housing and Urban Development, Federal Emergency Management Agency, Federal Emergency Management Agency, Federal Emergency Management Agency, Federal Emergency Management Agency  
<sup>18</sup> U.S. Department of Housing and Urban Development, Federal Emergency Management Agency, Federal Emergency Management Agency, Federal Emergency Management Agency, Federal Emergency Management Agency  
<sup>19</sup> U.S. Department of Housing and Urban Development, Federal Emergency Management Agency, Federal Emergency Management Agency, Federal Emergency Management Agency, Federal Emergency Management Agency  
<sup>20</sup> U.S. Department of Housing and Urban Development, Federal Emergency Management Agency, Federal Emergency Management Agency, Federal Emergency Management Agency, Federal Emergency Management Agency  
<sup>21</sup> U.S. Department of Housing and Urban Development, Federal Emergency Management Agency, Federal Emergency Management Agency, Federal Emergency Management Agency, Federal Emergency Management Agency

## Policy Factsheets: Geoscience In Your State

How does geoscience affect your state? The AGI Geoscience Policy team created State Geoscience Information factsheets to inform geoscientists and decision makers on how geoscience impacts their state. These factsheets highlight geoscience areas including, employment, water, minerals, energy and hazards in each state. They also demonstrate how federal research agencies, such as the National Science Foundation, U.S. Geological Survey, National Aeronautics and Space Administration, and the National Ocean and Atmospheric Administration contribute beneficial geoscience information to each state. Browse factsheets on the *Geoscience in Your State* page.



## Geologic Mapping for the Nation

Geologic maps provide vital information for land-use planning, resource identification, and natural hazard avoidance, and are critical for growing the economy. Less than 50 percent of the conterminous U.S. has been mapped at the appropriate level of detail for today's challenges. In 1992, Congress established the National Cooperative Geologic Mapping Program (NCGMP) in the U.S. Geological Survey to address the nationwide need for detailed geologic mapping.

## Reports



## Geoscience Policy Recommendations for the New Administration and the 115th Congress (February, 2017)



Download the report

Geoscientists gather and interpret data about the Earth and other planets, providing the data, tools, and expertise to help solve some of America's greatest challenges. This set of policy recommendations outlines ways to achieve our shared national interests where the geosciences play a significant role. The policy proposals build on the consensus document *Geoscience for America's Critical Needs: Invitation to a National Policy Dialogue*, which was developed for the 2016 election. This report highlights the shared priorities of eight professional geoscientific societies that represent some 250,000 members. We in the geoscience community offer to share our scientific expertise and perspectives as you craft national policies to build a strong and competitive nation. The policy proposals laid out in this document are centered around five high-level thematic areas:

- **Enhancing national and homeland security,**
- **Increasing economic prosperity,**
- **Securing resources and strengthening national infrastructure,**
- **Supporting strong and resilient communities, and**
- **Growing a dynamic workforce**



## Geoscience for America's Critical Needs: Invitation to a National Policy Dialogue (September, 2015)

Explore the Critical Needs website;  Download the report

To order printed copies of the report, please email: [criticalneeds@agiweb.org](mailto:criticalneeds@agiweb.org)

The geoscience community has the knowledge, experience, and ingenuity to address a wide range of societal needs. We study Earth's systems, the complex geologic, marine, atmospheric, and hydrologic processes that sustain life and the economy. Geoscience expertise allows us to better understand and predict the interactions between people and Earth's systems; such expertise is essential to developing solutions to critical economic, environmental, health, and safety challenges. The American Geosciences Institute (AGI) connects Earth, science, and people by serving as a unifying force for the geoscience community. On behalf of the geoscientists represented by the 51 member societies of AGI, we invite you to join us in a dialogue on how to achieve our shared interests in meeting America's critical needs. This document outlines high-level actions to address major policy issues where the geosciences play a significant role.



## America's Increasing Reliance on Natural Gas: Benefits and Risks of a Methane Economy: Report of the Critical Issues Forum (November, 2014)

Visit the Forum website;  Download the report

The development of unconventional natural gas resources in the last decade has reshaped the energy mix in the U.S. Decisions that are being made now – often in sectors that may not have an obvious connection to gas production – will determine the energy mix over the coming decades. The 2014 Critical Issues Forum examined the 5- to 30-year outlook for the development of a natural gas-dominant energy sector in North America and discussed the associated benefits and risks. Presentations highlighted our current understanding of the interrelated geological, environmental, and economic aspects of natural gas development and stimulated discussion on two overarching questions: 1) Is a natural gas-dominant economy achievable in North America? and 2) Would a natural gas-dominant economy be desirable?



### **"Defining Critical Issues" Survey: Final Report** (February, 2014)

Read the executive summary;  Download the report

The aim of the web-based survey was to understand how the decision-making community, geoscience community, and the public define the term “critical issue,” as well as which critical issues were of top concern to each community.



### **Critical Needs for the Twenty-first Century: The Role of the Geosciences** (September, 2012)

 Download the report

Geoscience Policy with the guidance and input of AGI's Member Societies has updated its 2008 Critical Needs document that was prepared for the last presidential election. The updated document provides a list of eight critical needs followed by policy recommendations to help the nation meet these needs. With a burgeoning human population, rising demand for natural resources and a changing climate, it is critical to more fully integrate Earth observations and Earth system understanding into actions for a sustainable world.

### **Critical Needs for the Twenty-first Century: The Role of the Geosciences** (September, 2008)

 Download the report

Geoscience Policy with the guidance and input of AGI's Member Societies produced the 2008 Critical Needs document which provides a list of seven critical needs followed by policy recommendations to help the nation meet these needs.

## **Factsheets**

View factsheets on energy, climate change, natural resources, and geoscience technology from the Geoscience Policy Program.

## **Image:**



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