

## Monthly Review: December 2012

*The American Geosciences Institute's monthly review of geosciences and policy goes out to the leadership of AGI's member societies, members of the AGI Geoscience Policy Committee, and others as part of a continuing effort to improve communications about the role of geoscience in policy. The current monthly review and archived monthly reviews are all available online. Subscribe to receive the Geopolity Monthly Review by email.*

### \*\*\*Announcements\*\*\*

1. **Apply for AGI's 2013-2014 William Fisher Congressional Geoscience Fellowship**
2. **AGI's 2013 AIPG/AGI Summer Internship Application Due March 15**
3. **Congressional Visits Day in March - Join us in DC**

### \*\*\*Congressional News and Updates\*\*\*

4. **Sequestration Update for December 2012**
5. **Superstorm Sandy Emergency Spending Bill Delayed**
6. **Coast Guard and Defense Reauthorization Bills Passed in December**
7. **Senator Barbara Boxer to Begin Climate Change Caucus in 113th Congress**

### \*\*\*Federal Agency News and Updates\*\*\*

8. **EPA and NOAA Administrators will Step Down in Early 2013**
9. **NOAA Releases Sixth Annual Arctic Report Card**

### \*\*\*Other News and Updates\*\*\*

10. **Shell Drilling Rig Runs Aground Near Kodiak Island**
11. **Key Reports and Publications**
12. **Key Federal Register Notices**
13. **Key AGI Geoscience Policy Updates**

### 1. Apply for AGI's 2013-2014 William Fisher Congressional Geoscience Fellowship

The American Geosciences Institute is accepting applications for the 2013-2014 William L. Fisher Congressional Geoscience Fellowship.

Congressional fellows spend one year in Washington, DC working as a staff member in the office of a member of Congress or in a congressional committee. The fellowship represents a unique opportunity to gain first-hand experience with the federal legislative process and make practical contributions to the effective and timely use of geoscientific knowledge on issues relating to the environment, resources, natural hazards, and federal science policy. The application deadline is February 1, 2013.

Several of AGI's Member Societies also sponsor Congressional Science Fellowships. For further information, contact the American Geophysical Union, the Geological Society of America, or the Soil Science Society of America. AAAS, AIP, ASCE, AMS and other related societies offer similar fellowships for Congress and AAAS offers fellowships for the executive branch. It is acceptable to apply to more than one society in a given year. Stipends, application procedures, eligibility, timetables, and deadlines vary.

[Back to top](#)

### 2. AGI's 2013 AIPG/AGI Summer Internship Application Due March 15

The American Geosciences Institute's Geoscience Policy program offers summer and semester internship opportunities for

geoscience students (undergraduate students and/or Masters students) with an interest in public policy and in how Washington impacts the geoscience community.

Interns gain a first-hand understanding of the legislative process and the operation of executive branch agencies while enhancing their writing, research, and web publishing skills. Deadlines for online submission of applications are March 15 for summer, April 15 for fall and October 15, 2013 for spring 2014.

The American Geophysical Union, the Soil Science Society of America, the American Institute of Physics, the American Association for the Advancement of Science and the American Chemical Society offer similar internships that may be of interest to geoscience students. Please visit their web sites or contact AGI at bonner at agiweb.org for more information.

Back to top

### **3. Congressional Visits Day in March – Join Us in DC**

Geoscientists are invited to join organized groups of scientists and engineers for workshops and visits with congressional members and committees at this year's Science – Engineering – Technology Congressional Visits Day (SET-CVD) on March 12-13, 2013.

Decision makers need to hear from geoscientists. Become a citizen geoscientist and join many of your colleagues for a workshop followed by a day of conducting visits with members of Congress or congressional staff on Capitol Hill to speak about the importance of geoscience research, development, and education.

Please send an email to bonner at agiweb.org for more information or to sign up.

Back to top

### **4. Sequestration Update for December 2012**

On January 1, 2013, the House of Representatives passed the American Taxpayer Relief Act of 2012 (H.R. 8) which extended certain tax rates, let others expire, and delayed implementation of the automatic spending cuts (the "sequester" or "sequestration") outlined in the Budget Control Act of 2011 (P.L. 112-25) for two months. If not replaced, revised, or further delayed, the sequester would take place on March 1, 2013.

H.R. 8 reduces the total amount of the sequestration from \$1.2 trillion over a decade to \$1.176 trillion. To pay for this \$24 billion reduction in the total amount of sequestration, it lowers the discretionary spending caps by \$12 billion (split evenly between defense and non-defense) and finds \$12 billion in revenue from a provision concerning Roth IRAs. The \$12 billion cut in discretionary spending caps is achieved by reducing the current discretionary spending cap over two years for both defense and non-defense. The caps are cut by \$2 billion each in fiscal year (FY) 2013 and by \$4 billion each in FY 2014.

If the sequester takes place in FY 2013, instead of a total cut of \$109 billion it would now be \$107.147 billion (due to the \$24 billion reduction in the overall \$1.2 trillion sequester cut over nine years). Half of that would be defense and the remainder from non-defense (\$53.573 billion each). As under the BCA, part of the non-defense spending cuts comes from mandatory spending.

Back to top

### **5. Superstorm Sandy Emergency Spending Bill Delayed**

On December 30, 2012, the Senate passed an emergency supplemental appropriations bill (H.R. 1) to provide \$60.4 billion to help with the recovery of Superstorm Sandy. The House Appropriations Committee then filed a \$27 billion measure on January 1, 2013 with a plan to vote on the bill as well as an amendment to increase the aid by another \$33 billion to meet the Senate's bill. Though the House did not hold a vote before the end of the 112th Congress, Speaker John Boehner (R-OH) has scheduled two votes as a top priority for the incoming 113th Congress.

On Friday, January 4, 2013, the House and Senate voted to increase the borrowing authority of the National Flood Insurance Program (NFIP) by \$9.7 billion and on January 15, 2012, the House will vote on a \$51 billion bill. The Senate will have to reconsider the \$51 billion bill since the bill they passed in December died with the end of the 112th Congress.

Back to top

### **6. Coast Guard and Defense Reauthorization Bills Passed in December**

Congress sent the Coast Guard and Maritime Transportation Act of 2012 (P.L. 112-213) and the National Defense Authorization Act for Fiscal Year 2013 (H.R. 4310) to the President's desk in December, 2012. The Coast Guard reauthorization act had passed the House in November, 2011 but was stuck in the Senate over disagreements on funding and the fate of the *Polar Sea* icebreaker.

The defense authorization act authorizes \$552.21 billion for defense programs and includes provisions related to rare earth materials.

The Coast Guard reauthorization act will require a business-case analysis for reactivating the *Polar Sea* icebreaker and temporarily prohibit its dismantling. The same day the bill was presented to the President for his signature, the Coast Guard reactivated its other heavy icebreaker, the *Polar Star*, after a \$56 million refurbishing in Seattle, Washington.

The reauthorization extends for one year an existing moratorium that prevents the Environmental Protection Agency (EPA) and any state from issuing a requirement for vessels that are smaller than 79 feet to obtain permits for discharging engine fluids or certain wastewater.

The final defense authorization act was the product of a conference committee. The conferees stripped out a provision added in the Senate bill by Senators Jon Kyl (R-AZ), Dean Heller (R-NV), and Jim Risch (R-ID) to make it official US policy to promote the domestic supply and production of materials necessary for economic growth and defense needs. They also stripped out a provision added by Senator Bob Casey (D-PA) which would have required the Pentagon to prepare a report on the feasibility of recycling rare earth elements from fluorescent light bulbs. While the final version of the bill did not contain Casey's original language, the conferees did ask for a similar report to be submitted to the House and Senate Armed Services committees. The conferees required the deputy assistant secretary of Defense for manufacturing and industrial base policy to "provide relevant policy guidance and oversight of matters that pertain to ensuring reliable resource availability of materials critical to national security."

[Back to top](#)

#### **7. Senator Barbara Boxer to Begin Climate Change Caucus in 113th Congress**

Senator Barbara Boxer (D-CA) announced on December 11, 2012 that she intended to create a congressional caucus to address climate change.

Senator Boxer is the chairwoman of the Senate Environment and Public Works Committee and has been a long time advocate for action on climate change. In 2009, Boxer and Senator John Kerry (D-MA) introduced the Clean Energy Jobs and American Power Act (S. 1733) that would create a cap and trade system to address greenhouse gas emissions, but the bill did not pass the Senate.

[Back to top](#)

#### **8. EPA and NOAA Administrators will Step Down in Early 2013**

In December, 2012, Administrator Jane Lubchenco of the National Oceanic and Atmospheric Administration (NOAA) and Administrator Lisa Jackson of the Environmental Protection Agency (EPA) announced their resignations. Lubchenco and Jackson have served as administrators of their agencies since their Senate confirmations in early 2009.

Lubchenco, who will step down in February, 2013, will return to the faculty of Oregon State University where she began teaching in 1977. Her resignation comes at a time when NOAA is experiencing shrinking budgets at the same time as ballooning costs for several satellites. NOAA is facing the possibility of a weather data gap due to the expected delays between the launch of the first Joint Polar Satellite System (JPSS-1) and the limited lifespan of the currently operating Suomi National Polar-orbiting Partnership (Suomi-NPP) satellite.

Jackson, who will resign after the President's State of the Union speech, has not announced her plans after leaving the EPA. Major accomplishments during Jackson's tenure include the first greenhouse gas regulations, new vehicle fuel economy standards, new air standards for industrial boilers, incinerators, and cement kilns.

[Back to top](#)

#### **9. NOAA Releases Sixth Annual Arctic Report Card**

The National Oceanic and Atmospheric Administration (NOAA) has released its sixth annual "Arctic report card." The "report card" tracks observations throughout the Arctic in the atmosphere, sea ice and ocean, the terrestrial cryosphere, and marine and terrestrial ecosystems. The report finds that even though the Arctic experienced a relatively "unremarkable year" for surface air temperatures, numerous record-breaking melting events occurred.

The report notes that record low snow extent occurred in June and record low sea ice extent occurred in September. NOAA reports the longest observed yet duration of melting on the Greenland ice sheet and that a rare, nearly ice sheet-wide melt event occurred

in July. Below the tundra, record high permafrost temperatures were measured in northernmost Alaska in 2012.

[Back to top](#)

## **10. Shell Drilling Rig Runs Aground Near Kodiak Island**

During a raging storm on New Year's Eve, the Royal Dutch Shell PLC drill ship, *Kulluk*, ran aground near Alaska's Kodiak Island as it was being towed to Seattle for maintenance. The Coast Guard instructed the crew to release the ship as waves as high as 36 feet tall and winds as fast as 62 miles per hour threatened the safety of the crew aboard the tugboat. The *Kulluk* is one of Shell's two drill ships that operated in Arctic waters in 2012 along with the *Noble Discoverer* which nearly ran aground after losing its mooring in July, 2012. There were no oil or chemicals spilled in either incident.

This incident is just the latest in what has become a difficult year for Shell's Arctic drilling plans. Drilling was delayed significantly by heavier than expected sea ice, delays in the Coast Guard's certification of Shell's Arctic Challenger oil spill response vessel, the company's failed test of its oil spill containment dome, and Shell's inability to meet the Environmental Protection Agency's (EPA) initial air pollution standards.

After initially planning to drill five wells in the Chuckchi and Beaufort Seas, Shell had to leave for the winter season only having drilled a few top holes.

[Back to top](#)

## **11. Key Reports and Publications**

\*\*\*National Academy of Sciences (NAS)\*\*\*

### **Disaster Resilience: A National Imperative**

Economic damages from national disasters in the United States exceeded \$55 billion, with 14 events costing more than \$1 billion in damage each. This report, prepared by the Committee on Science, Engineering, and Public Policy (COSEPUP), addresses the broad issue of increasing the nation's resilience to disasters. Resilience is defined as the ability to prepare and plan for, absorb, recover from and more successfully adapt to adverse events. It provides goals, baseline conditions, and performance metrics for national resilience and describes what additional information, data, and obstacles need to be addressed to increase the nation's resilience to disasters.

### **Himalayan Glaciers: Climate Change, Water Resources, and Water Security**

Though scientific evidence has shown that glaciers in South Asia's Hindu Kush mountain range are retreating, the consequences for the region's water supply are unclear, according to this report. The Hindu Kush mountain range's river systems provide water for drinking, irrigation, and other uses for about 1.5 billion people. Glacial retreat could significantly impact regional water supplies. This report makes recommendations and sets guidelines for the future of climate change and water security in the Himalayan region.

### **Preparing for the Third Decade (Cycle 3) of the National Water-Quality Assessment (NAWQA) Program**

The National Academies have released a report, which reflects on the first two decades of the U.S. Geological Survey's (USGS) National Water Quality Assessment (NAWQA) Program and discusses the next decade of NAWQA.

The report concludes that NAWQA has been successful in assessing U.S. water-quality conditions, how they have changed over time, and how natural features and human activities have affected water-quality.

In the third cycle of NAWQA, challenges include maintaining NAWQA as a national program in the current economy, sustaining new activities in addition to long-term studies, preserving focus in the face of multiple competing stakeholder demands. The report emphasizes the need for collaboration with other USGS, sector as well as other external programs, and with other federal agencies, state and local governments, the private sector as well as other external programs.

\*\*\*Government Accountability Office (GAO)\*\*\*

### **Mineral Resources: Mineral Volume, Value, and Revenue**

Congress asked the Government Accountability Office (GAO) to review minerals extracted from federal lands and to provide information on the volume and dollar value of leasable minerals in fiscal years 2010 and 2011, amount the federal government collected for leasable minerals in royalties, rents, bonuses, and other revenue and how this amount was calculated, and availability of data on the volume and dollar value of hardrock minerals extracted from federal lands in fiscal years 2010 and 2011. Leasable minerals, including oil, gas, and coal, are available through leases requiring payment to the federal government and royalties are

paid based on the value of the minerals extracted. Hardrock minerals are governed by the General Mining Act of 1872, which makes these minerals available to operators through a federal claim-patent system that provides the right to explore, extract, and develop the federal mineral deposit without having to pay a royalty.

GAO found that there were nearly 70 different types of leasable minerals extracted from federal lands and waters in FY2010-2011 though their volume cannot be calculated because they use different units of measure. According to the Office of Natural Resource Revenue (ONRR), a new agency within the Department of the Interior (DOI) created after the breakup of the former Minerals Management Service, the total value of all leasable minerals extracted from federal lands and sold in FY 2010 and FY 2011 was \$92.3 billion and \$98.6 billion, respectively. The resulting revenue to the federal government from mineral leasing was \$11.3 billion in FY 2010 and \$11.4 billion in FY 2011.

GAO found that federal agencies do not generally collect data on the amount and value of hardrock minerals extracted from federal lands because there is no federal royalty that would necessitate doing so. DOI is working to implement an international initiative to promote openness and accountability in the oil, gas, and mining sectors called the Extractive Industries Transparency Initiative.

### **James Webb Space Telescope: Actions Needed to Improve Cost Estimate and Oversight of Test and Integration**

The James Webb Space Telescope (JWST) is one of the National Aeronautics and Space Administration's (NASA) most expensive science projects and once deployed will be capable of detecting the first galaxies that formed in the early Universe. JWST's instruments will work primarily in the infrared range of the electromagnetic spectrum, with some capability in the visible range. NASA has spent significantly more money and time on the project than previously planned.

This report was requested by the conferees of the Consolidated and Further Continuing Appropriations Act of 2012 and assesses the extent to which NASA's revised cost and schedule estimates are reliable based on best practices, the major risks and technological challenges JWST faces, and the extent to which NASA has improved oversight of JWST.

[Back to top](#)

### **12. Key Federal Register Notices**

**EO** – The White House issued a proclamation on December 5, 2012 designating December 2012 as Critical Infrastructure Protection and Resilience Month. [Wednesday, December 5, 2012 (Volume 77, Number 234)]

**Navy** – The Ocean Research Advisory Panel will hold an open meeting on January 16, 2013. Details can be found in the notice. [Thursday, December 6, 2012 (Volume 77, Number 235)]

**EPA** – The Environmental Protection Agency (EPA) has announced a 7-day extension of the comment period for the proposed “Reconsideration of Certain New Source and Startup/Shutdown Issues: National Emissions Standards for Hazardous Air Pollutants from Coal- and Oil-fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial –Commercial-Institutional Steam Generating Units.” Comments are now due January 7, 2013. [Wednesday, December 12, 2012 (Volume 77, Number 239)]

**NOAA** – The National Oceanic and Atmospheric Administration (NOAA) has announced an open meeting of the National Climate Assessment and Development Advisory Committee to be held on January 11, 2013. Details can be found in the notice. [Thursday, December 13, 2012 (Volume 77, Number 240)]

**EO** – The White House established a Hurricane Sandy Rebuilding Task Force on December 7, 2012. Functions and makeup of the Task Force can be found in the notice. [Friday, December 14, 2012 (Volume 77, Number 241)]

**EPA** – The Environmental Protection Agency (EPA) is requesting comments on specific aspects of a proposed information collection for Oil Pollution Prevention; Spill Prevention, Control, and Countermeasure Plans. The comment period ends on February 15, 2013. [Monday, December 17, 2012 (Volume 77, Number 242)]

**NOAA** – The National Oceanic and Atmospheric Administration (NOAA) is announcing in this final rule a new schedule of fees

for the sale of its data, information and related products and services that the National Environmental Satellite, Data, and Information Service. [Wednesday, December 19, 2012 (Volume 77, Number 244)]

**EPA** – The Environmental Protection Agency (EPA) is announcing revisions to the final National Emissions Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources. The revisions are meant to provide flexibility and clarity to improve implementation. [Friday, December 21, 2012 (Volume 77, Number 246)]

**EPA** – The Environmental Protection Agency (EPA) is publishing the final “National Water Program 2012 Strategy: Response to Climate Change.” It can be found on their web site. [Wednesday, December 26, 2012 (Volume 77, Number 247)]

**NOAA** – The National Oceanic and Atmospheric Administration (NOAA) has published this notice to announce the availability of the draft report of the Science Advisory Board’s Research and Development Portfolio Review Task Force for public comment. Comments are due January 23, 2013. [Wednesday, December 26, 2012 (Volume 77, Number 247)]

**BLM** – The Bureau of Land Management (BLM) is announcing the National Petroleum Reserve in Alaska (NPR-A) Final Integrated Activity Plan/Environmental Impact Statement. [Friday, December 28, 2012 (Volume 77, Number 249)]

Back to top

### **13. Key AGI Geoscience Policy Updates**

- **Updated Estimated Impacts of Sequestration and Tools for Advocacy (1/3/13)**

Back to top

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Monthly Review prepared by Wilson Bonner, Staff of Geoscience Policy

Sources: Associated Press, AAAS, Environment and Energy Daily, Greenwire, New York Times, Washington Post, National Academies Press, Government Accountability Office, Open CRS, Thomas, House of Representatives, U.S. Senate, the White House, Department of Energy, Department of the Interior, National Aeronautics and Space Administration, Environmental Protection Agency, National Science Foundation, National Oceanic and Atmospheric Administration, Nuclear Regulatory Commission, Department of Commerce, United Nations, Department of Treasury, U.S. Geological Survey, Royal Dutch Shell PLC.

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