

Monthly Review: August 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.

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1. General Services Administration Freezes Travel Rates for Federal Agencies

On August 14, the General Services Administration (GSA) announced that 2013 federal travel per diem rates would stay at current fiscal year (FY) 2012 levels. GSA sets travel allowances for federal employees who travel for work, known as per diem rates, which vary depending on location. GSA anticipates this policy will save an estimated \$20 million in taxpayer money.

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2. Appropriations Update for August 2012

Congress was not in session for the month of August but the Obama Administration and congressional agencies continued work to define and understand the impacts of the automatic cuts, or sequestration, mandated in the Budget Control Act of 2011 (BCA, P.L. 112-25) upon the failure of the Joint Select Committee on Deficit Reduction.

The Congressional Budget Office (CBO) released a report, "An Update to the Budget and Economic Outlook: Fiscal Years 2012 to 2022," on August 22. The report predicts the budget baseline scenario, which assumes policy changes set to occur in January under current law remain in place, could lead to another recession in 2013 and raise unemployment to 9.1 percent. The CBO predicts that an alternative fiscal scenario, in which the Bush income tax cuts and other tax provisions were to continue

permanently and sequestration was avoided, would significantly raise the federal deficit in the long term but would strengthen the economy in 2013. A blog post prepared by the Bipartisan Policy Center and another by the Center on Budget and Policy Priorities summarize the findings of the CBO report.

The Congressional Research Service (CRS) released a report on August 9 that provides the legislative background of the sequestration process, a list of the certain programs that are exempt from sequestration, and special rules that govern the effects of sequestration on others. The report, titled “Budget ‘Sequestration’ and Selected Program Exemptions and Special Rules,” defines sequestration as “a process of automatic, largely across-the-board spending reductions under which budgetary resources are permanently canceled to enforce certain budget policy goals.” While the Balanced Budget and Emergency Deficit Control Act of 1985 (P.L. 99-177), the original authorization of the sequestration, provides a list of programs and types of spending that are exempt from sequestration, there is no definitive list of programs or types of spending that would absolutely be subject to sequestration. The report says, “The impact of sequestration on any given program will depend on the actions and interpretations of [the Office of Management and Budget].” The program exemptions that are listed are mostly mandatory, such as Social Security and Medicaid; low-income programs, including the Children’s Health Insurance Program and federal Pell Grants; programs administered by the Department of Veterans Affairs; and any obligated balances, carried over from prior years, for nondefense programs.

The Office of Management and Budget (OMB) released a report on August 20 on another type of sequestration authorized in the BCA known as the discretionary sequester. If Congress spends more than the caps agreed to in the BCA, a sequestration of discretionary spending is ordered. The report discusses whether a discretionary sequester would occur under the actions taken to date by Congress on discretionary spending bills. Though no fiscal year (FY) 2013 appropriations bills have been passed into law, Speaker of the House John Boehner (R-OH) and Senate Majority Leader Harry Reid (D-NV) have agreed upon a six-month continuing resolution at the \$1.047 trillion cap set by the BCA. Since the CR has not been written, the report does not include any estimates for a discretionary sequester if the CR were to pass.

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3. Bingaman Introduces Nuclear Waste Administration Act of 2012

On August 1, Senator Jeff Bingaman (D-NM) introduced the Nuclear Waste Administration Act of 2012 (S. 3469). The bill incorporates recommendations from the final report of the Blue Ribbon Commission on America’s Nuclear Future (BRC). The BRC recommended geologic exploration to find a suitable waste repository, support for nuclear research and development, a waste storage selection process requiring consent of affected communities, and more efficient waste transport.

S. 3469 would block the approval of temporary storage sites until a permanent repository was identified. This was a point of contention among Bingaman and others drafting the bill, Senators Lisa Murkowski (R-AL), Dianne Feinstein and Lamar Alexander (R-TN), but the language has remained in the bill. It is unlikely that this bill will move in the current Congress, but Bingaman, Chairman of the Senate Committee on Energy and Natural Resources will hold hearings in September to build a legislative record for S. 3469.

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4. Senate Natural Resources Committee Holds Field Hearing on Climate Change

On August 17, the Senate Committee on Energy and Natural Resources held a field hearing in Santa Fe, New Mexico to discuss the impacts of climate change on the Intermountain West. Governor Walter Dushene of the Santa Clara Pueblo, Craig Allen of the United States Geological Survey (USGS), Nate McDowell of the Los Alamos National Laboratory, Kelly Redmond of the National Oceanic and Atmospheric Administration’s Western Regional Climate Center, and writer William DeBuys were present to testify.

Committee Chairman Jeff Bingaman (D-NM) pointed out in his opening statement the connection between climate change, drought and wildfires by citing the National Research Council’s 2011 report, America’s Climate Choices. He said he hopes the hearing “will restart a national conversation about climate change” and although “talk of climate change has become highly politicized, it is critical that we reduce greenhouse gas emissions here and abroad.”

Santa Clara Pueblo Governor Dasheno called climate change “a significant factor” contributing to 2011’s Las Conchas wildfire, a fire that burned more than 150,000 acres. Research ecologist Craig Allen of the USGS said, “There is a high level of scientific confidence that, as a result of drought impacts coupled with warmer temperatures, forests in the Southwest are at increasing risk of severe wildfire and tree mortality.” McDowell’s testimony discussed the impacts of climate change on vegetation mortality, Redmond testified that aridity is “likely” to persist or increase and that observations and monitoring are critical to response and adaptation. She warned against letting climate change “intimidate us too much.” She argued that it is “certainly a worthy challenge,” but it is “not insoluble.” DeBuys pointed out the potential negative impacts of increased exposure of soil to air as a result of wildfires and vegetation mortality. More dust can lead to stronger dust storms and accelerated melting of snow. Audio of the hearing and links to witness testimonies can be found on the committee web site.

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5. House Halves Marine Debris Research Program Authorization

On August 1, the House of Representatives passed the Marine Debris Act Amendments of 2012 (H.R. 1171), continuing the National Oceanic and Atmospheric Administration’s (NOAA) Marine Debris Program (MDP) but reducing its authorization levels by half. The bill, introduced by Representative Sam Farr (D-CA), authorizes \$4.9 million to the program, less than half of the previously authorized \$10 million.

This cut comes despite reports of debris from the 2011 Tohoku earthquake and tsunami washing up on the west coast and Hawaiian beaches. The state of Alaska has already spent \$200,000 monitoring debris from the air, but much of the remaining debris is too small to see from long distances.

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6. Bill Introduced to Block BLM Hydraulic Fracturing Rule

Representative Bill Flores (R-TX) introduced the Federal Lands Regulatory Certainty Act of 2012 (H.R. 6235) on August 9 to delay further action on the Bureau of Land Management’s (BLM) rule for hydraulic fracturing on public land currently in the public comment period. The BLM rule would obligate oil and gas companies to disclose the chemicals used in hydraulic fracturing and regulate well design and wastewater disposal.

The rule was first proposed by the agency in May 2012 and the public comment period was extended in June. Flores’s bill would delay the rule until the Department of the Interior (DOI) studies the affects of the rule on oil and gas production and whether it conflicts with state regulations. The bill has been referred to the House of Representatives Committee on Natural Resources.

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7. NASA Lands Curiosity Rover on Mars

At 1:32 AM Eastern Standard Time on August 6, 2012 the National Aeronautic and Space Administration (NASA) landed the Mars Science Laboratory on the surface of Mars. The rover, known as Curiosity, is NASA’s fourth and largest Mars rover. This achievement was augmented by the success of a new landing system, the sky crane maneuver, where Curiosity was lowered by a rocket-propelled platform.

Curiosity is outfitted with an unprecedented science payload with instruments from Russia, the U.S. and Spain. The Sample Analysis at Mars (SAM) experiment contains a quadrupole mass spectrometer and a gas chromatograph to measure isotopic ratios in rocks and the atmosphere. The Alpha Particle X-ray Spectrometer will measure traces elements in rocks and soil while using X-ray diffraction and fluorescence to measure bulk compositions. A laser spectrometer called ChemCam can measure elemental concentrations from up to 30 feet away. The Spanish Ministry of Education and Science contributed the Rover Environmental Monitoring Station which measures atmospheric pressure, temperature, humidity, wind velocity and ultraviolet radiation.

A nuclear generator provided by the Department of Energy (DOE) powers the rover. NASA estimates the generator could last for a full Martian year (687 Earth days) or more, providing a wealth of data on Martian geology.

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8. July Recorded as Hottest Month in the U.S. by NOAA

Following suit with the rest of the year, July of 2012 has been ranked the hottest month on record with an average temperature of 77.6 degrees Fahrenheit. 2012 is on pace to being the hottest year according to the National Oceanic and Atmospheric Administration (NOAA). The agency said on August 8 that in addition to being the hottest month recorded, July ranks among the top ten driest months since monitoring began in 1895.

The drought experienced by over 60 percent of the continental U.S. this summer has been the worst since just before the Dust Bowl in the early 1930s. Elevated fire risk, crop failure, livestock culling and moisture-depleted soil have resulted from the weather phenomenon. “Exceptional” drought, the most severe, now affects Missouri, Illinois, Indiana, Georgia, Arkansas, Kansas, Oklahoma and Texas.

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9. District Court Rules Against EPA's Cross-State Rule

On August 21, the United States Court of Appeals for the District of Columbia ruled that the Environmental Protection Agency (EPA) had exceeded its authority when it promulgated the Cross-State Air Pollution Rule, or the Transport Rule, in August 2011. This rule was written to address the problem of pollution from upwind states preventing neighboring states from attaining the level of air quality required under federal law.

While the court said EPA has the authority to set rules that would require upwind states "to bear responsibility for their fair share of the mess in downwind states," EPA had attempted with the Transport Rule to require cleanup according to the cost of reductions rather than dividing reductions according to the amount of pollution each upwind state was contributing. This would have created a trading system in which the states could buy and sell pollution credits and the necessary work would be done in the states where the cost of cleanup was the lowest and easiest to do. The court argues in the opinion written by Judge Brett Kavanaugh that this rule would have improperly required upwind states "to reduce their emissions by more than their own significant contribution to a downwind state's nonattainment." The opinion further charges EPA with imposing a federal plan instead of granting states the opportunity to implement their own reduction compliance plans as permitted in the Clean Air Act (42 U.S.C. 7401 et seq).

The Transport Rule is the latest attempt by the EPA to address this problem. In 2008, the US Court of Appeals for the District of Columbia ruled against the 2005 Clean Air Interstate Rule.

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10. DOI Introduces Plan for National Petroleum Reserve in Alaska

On August 13, the Department of the Interior (DOI) unveiled its plan for oil and gas development on the National Petroleum Reserve in Alaska (NPR-A), the U.S.'s largest contiguous federal reserve.

NPR-A is 22.5 million square acres, roughly the size of Indiana, and contains significant oil and gas deposits and landscapes like Peard Bay and Teshekpuk Lake. The plan sets aside five areas for environmental protection and allows oil and gas development of 11.8 million acres of the reserve.

Secretary of the Interior Ken Salazar explained that the petroleum production plan, called Alternative B-2, would allow for safe development and transportation of oil and gas in NPR-A while preserving its ecosystems. Groups like Pew Charitable Trusts have spoken out in support of the plan, citing its compromise of environmentalists' and energy proponents' interests. Oil companies and Senator Lisa Murkowski (R-AK), ranking member of the Senate Committee on Energy and Natural Resources, have challenged the plan for being too restrictive. The final Integrated Activity Plan/Environmental Impact Statement is due in November, 2012.

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11. Nuclear Waste Storage Debate Stalls Plant Licenses

On August 7, the Nuclear Regulatory Commission (NRC) voted to delay granting or renewing licenses for nuclear power plants until the NRC addresses a federal court ruling in June obligating the commission to store waste in a less environmentally harmful way.

The NRC was also directed to assess storage facilities for vulnerability to fires and waste leakage. Temporary storage has lasted much longer than the commission anticipated because of political deadlock surrounding Yucca Mountain.

Long term storage above ground is vulnerable to natural hazards and in wake of the disaster at the Fukushima Power plant after the Japanese tsunami in 2011, the court felt the NRC was risking severe environmental and health effects. The commission was previously researching the possibility of storing waste in wet or dry fuel casks for up to 300 years, but the Fukushima disaster and court ruling have proven this to not be a wise course of action.

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12. NSF Announces Marine Debris Rapid Response Research Grant Opportunity

On August 9, the National Science Foundation (NSF) released a letter announcing a Rapid Response Research (RAPID) funding opportunity. NSF announced this RAPID grant to address marine debris from the Tohoku earthquake and tsunami in 2011.

The National Oceanic and Atmospheric Administration (NOAA) estimates that five million tons of debris was pulled into the Pacific Ocean by the tsunami. The agency has determined that the majority of heavy waste sank, but the remaining debris has begun to wash ashore in the western U.S. and will continue until 2014. The RAPID will fund scientists conducting research on the debris field and testing facilities or equipment relevant to debris cleanup.

NSF Directorates for Biological Sciences, Geosciences, Engineering, Mathematical and Physical Sciences, and Computer & Information Science & Engineering and the Office of Cyberinfrastructure will accept proposals for funding through the RAPID grant. Previous RAPID grants have been announced after the tsunami itself, the New Zealand 6.3 magnitude earthquake in 2011 and the Deepwater Horizon oil spill in 2010.

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13. UN Introduces Ocean Protection Plan

On August 12, United Nations (UN) Secretary-General Ban Ki-moon announced an international oceans protection plan at an event commemorating the 30th anniversary of the UN Convention on the Law of the Sea (LOS) (Treaty Doc. 103-39). The protection plan, called the Ocean Compact, will support policies enmeshed by LOS and the UN Conference for Sustainable Development (Rio+20).

The Ocean Compact came in conjunction with the Yesou Declaration Forum in South Korea which focused on sustainable ocean development and protection of Earth's coastlines. Ban said the plan will address ocean acidification, pollution and invasive marine species. The secretary-general discussed how the plan will address ocean heating and rising sea levels worldwide.

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14. AMS Adopts an Updated Climate Change Information Statement

The American Meteorological Society (AMS) released a new statement on climate change in August that states global warming is "unequivocal" and that emissions of greenhouse gases as a result of human activity are the "dominant cause." The statement uses peer-reviewed scientific literature and assessments and reports from the Intergovernmental Panel on Climate Change, National Academy of Sciences, and the U.S. Global Change Research Program to answer how is the climate changing, why it is changing, how it can be projected into the future, and how it is expected to change in the future.

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15. Key Reports and Publications

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

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

This report analyzes the past accomplishments and future possibilities for the U.S. Geological Survey (USGS) National Water-Quality Assessment Program (NAWQA). NAWQA monitors surface water and groundwater quality through collection and interpretation of physical, chemical, and biological data. The report found major successes of the program to be chemical assessment of surface water and groundwater and a significant impact on water management policy. Recommendations for future activities of the program include continued monitoring of water quality and improving monitoring technology.

Weather Services for the Nation: Becoming Second to None

This report investigates current challenges facing the National Weather Services (NWS) and recommends solutions to improve it. NWS is a weather monitoring program under the National Oceanic and Atmospheric Administration (NOAA). The problems identified in the report are using the most advanced technology and science, providing information quickly and efficiently, and partnering with the wealth of organizations which can provide information to NWS. The report recommends the NWS identify and improve its unique capabilities, reorganize its functional structure and collaborate with the growing private sector investigating weather phenomena.

Disaster Resilience: A National Imperative

This report evaluates the resilience of the U.S. to disasters and makes recommendations to improving that resilience. The report recommends federal agencies incorporate disaster resilience into their missions, gather of disaster-related data on loss of life and damage to property from major disasters. The Department of Homeland Security should create a National Resilience Scorecard and evaluate infrastructure vulnerable to disasters, according to the report. To improve resilience, the report recommends private and public groups encourage communities to invest in local risk management strategies.

A Review of NASA Human Research Program's Scientific Merit Process: Letter Report

In this report, the National Academies reviewed the National Aeronautics and Space Administration (NASA) Human Research Program's scientific merit assessment process used for directing research. The report finds the process is scientifically rigorous and similar to merit criteria used by other science agencies for comparable types of research. The report includes recommendations on how to streamline the accountability and transparency of NASA's current processes. The recommendations are the result of a public workshop and an Institute of Medicine committee.

*****Congressional Research Service (CRS)*****

Budget "Sequestration" and Selected Program Exemptions and Special Rules

The Congressional Research Service released a report on August 9 that provides the legislative background of the sequestration process, a list of the certain programs that are exempt from sequestration, and special rules that govern the effects of sequestration

on others. The report defines sequestration as “a process of automatic, largely across-the-board spending reductions under which budgetary resources are permanently canceled to enforce certain budget policy goals.” While the Balanced Budget and Emergency Deficit Control Act of 1985 (P.L. 99-177), the original authorization of the sequestration, provides a list of programs and types of spending that are exempt from sequestration, there is no definitive list of programs or types of spending that would absolutely be subject to sequestration. The report says, “The impact of sequestration on any given program will depend on the actions and interpretations of [the Office of Management and Budget].” The program exemptions that are listed are mostly mandatory, such as Social Security and Medicaid; low-income programs, including the Children’s Health Insurance Program and federal Pell Grants; programs administered by the Department of Veterans Affairs; and any obligated balances, carried over from prior years, for nondefense programs.

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16. Key Federal Register Notices

DOE- The Department of Energy (DOE) is seeking comments on improving regulation and regulatory review of its activities. Comments are due by September 17, 2012. [Wednesday August 8, 2012 (Volume 77, Number 154)]

EPA – The Environmental Protection Agency is issuing its final new source performance standards for volatile organic compounds from leaking components at onshore natural gas processing plants and new source performance standards for sulfur dioxide emissions from natural gas processing plants. The final rule is effective October 15, 2012. [Thursday, August 16, 2012 (Volume 77, Number 160)]

NSF – The National Science Foundation has announced an open meeting of the Advisory Committee for Environmental Research and Education on September 12-13 in Arlington, Virginia. Details can be found in the notice. [Tuesday, August 21, 2012 (Volume 77, Number 163)]

DOE – The Department of Energy has submitted their 2012 Annual Plan for the Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Resources Research and Development Program to Congress. Plan can be found in the notice. [Thursday, August 23, 2012 (Volume 77, Number 165)]

DOE/NSF – The Department of Energy (DOE) and the National Science Foundation (NSF) are announcing an open meeting of the DOE/NSF Nuclear Science Advisory Committee on September 21. The meeting will be broadcast live on the internet. More details can be found in the notice. [Monday, August 27, 2012 (Volume 77, Number 167)]

DOE – The President’s Council of Advisors on Science and Technology (PCAST) will hold a partially closed meeting on September 7 at the National Academy of Sciences. More details and an agenda can be found in the notice. [Monday, August 27, 2012 (Volume 77, Number 167)]

EPA – The Environmental Protection Agency is announcing an extension of the public comment period for the first draft assessment of “Policy Assessment for the Review of the Ozone National Ambient Air Quality Standards: First External Review Draft.” Comments are due by October 12, 2012. [Monday, August 27, 2012 (Volume 77, Number 167)]

EPA – The Environmental Protection Agency Science Advisory Board (SAB) is announcing a joint public teleconference of the SAB and the Board of Scientific Counselors to discuss a draft report providing advice on the implementation of the Office of Research and Development’s strategic directions for research. The meeting will be on September 19 and more details can be found in the notice. [Tuesday, August 28, 2012 (Volume 77, Number 168)]

EPA – The Environmental Protection Agency is announcing an open meeting of the National Drinking Water Advisory Council on October 4-5 in Chicago, Illinois. [Tuesday, August 28, 2012 (Volume 77, Number 168)]

EPA – The Environmental Protection Agency is announcing an open teleconference of the chartered Science Advisory Board to review a draft report regarding EPA’s Scientific and Technological Achievement Awards for fiscal year 2012. Details can be found in the notice. [Tuesday, August 28, 2012 (Volume 77, Number 168)]

USGS – The United States Geological Survey is announcing an open meeting of the National Geospatial Advisory Committee on September 18-19 in Washington, DC. More details can be found in the notice. [Tuesday, August 28, 2012 (Volume 77, Number 168)]

NASA – The National Aeronautic and Space Administration (NASA) is announcing an open meeting of the NASA Advisory Council to solicit, from the scientific community, scientific and technical information relevant to program planning. The meeting will be held on September 18, 2012. [Tuesday, August 28, 2012 (Volume 77, Number 168)]

EPA – The Environmental Protection Agency is announcing an open meeting of the Clean Air Act Advisory Committee on September 19-20. Details can be found in the notice. [Wednesday, August 29, 2012 (Volume 77, Number 169)]

NOAA – The National Oceanic and Atmospheric Administration is announcing a meeting of the National Sea Grant Advisory Board on September 16-17. Board members will discuss and provide advice on the National Sea Grant College Program in the

areas of program evaluation, strategic planning, education and extension, science and technology programs, and other matters as described in the agenda found in the notice. [Thursday, August 30, 2012 (Volume 77, Number 170)]

EO – On August 27, President Barack Obama ordered the flags of the United States to be flown at half-staff in memory of Neil Armstrong. [Thursday, August 30, 2012 (Volume 77, Number 170)]

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17. Key AGI Geoscience Policy Updates

- Hearing on Energy Development on Federal and Non-Federal Lands (8/7/12)
- Hearing on Climate Change Science and Local Adaptation Strategies (8/2/12)
- Hearing on the Relationship Between Business and Research Universities (8/2/12)
- Hearing on the International Space Station (8/2/12)
- Briefing on Earth Observations, Science, and Services (8/2/12)

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Monthly Review prepared by Wilson Bonner, Staff of Geoscience Policy, and Stephen Ginley AIPG/AGI Summer 2012 Intern.

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, General Services Administration, United Nations, American Meteorological Society

This monthly review goes out to members of the AGI Geoscience Policy Committee, the leadership of AGI's member societies, and others as part of a continuing effort to improve communications about the role of geoscience in policy. For additional information on specific policy issues, please visit the web site or contact us at govt@agiweb.org or (703) 379-2480.

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