

In this Issue:

- NSC Alliance Asks Senate Appropriators to Restore Biodiversity Research Programs at USGS
 - USGS Director Nominee Sails Through Confirmation Hearing
 - Participate in the BCoN Survey: Harnessing Biodiversity Collections Data for Addressing National Challenges
 - Budget Accord Offers Opportunity to Increase Federal Science Funding
 - Trump's FY 2019 Budget Request Proposes Cuts to Science, Addendum Creates Confusion
 - NSF Releases FY 2019 Budget Details
 - President's Budget Would Cut USGS by 21 Percent
 - Lawmakers Race to Replace Retiring Appropriations Committee Chairmen
-

Through the NSC Alliance partnership with the American Institute of Biological Sciences, we are pleased to provide NSC Alliance members with the following public policy update. With proper attribution to NSC Alliance, all material from these reports may be reproduced or forwarded. We encourage you to share this report with colleagues at your institution. Anyone interested in receiving copies of the NSC Alliance Washington Report may subscribe at <http://www.NSCAlliance.org>-- it's free!

If you have any questions or require additional information regarding any of the following items, please contact NSC Alliance director of public policy Dr. Robert Gropp at 202-628-1500 x 250 or at rgropp@aibs.org.

NSC Alliance Asks Senate Appropriators to Restore Biodiversity Research Programs at USGS

The President of the National Science Collections Alliance (NSC Alliance) has sent a letter to the Senate Committee on Appropriations asking lawmakers to reject the proposed termination of the Biological Survey Unit and restore other on-going research initiatives at the U.S. Geological Survey (USGS).

The letter was in response to the President's fiscal year (FY) 2018 and 2019 budget requests for the USGS, as well as provisions in the Senate Subcommittee on Interior and Environment Appropriations FY 2018 appropriations bill that would gut funding for the Biological Survey Unit (BSU) and other research activities, particularly with respect to the core biological sciences that are needed to understand disease spread in humans and animals, food crop productivity and sustaining ecosystem services.

BSU is a group of six USGS scientists stationed at the Smithsonian Institution's National Museum of Natural History that has an annual budget of \$1.6 million and maintains an extensive

collection of bird, reptile, and mammal specimens. It was established in 1885 to study, survey, and catalogue plants and animal populations across the United States.

The NSC Alliance letter highlighted the importance of biological collections in identifying and validating the accuracy of species and studying disease transmission, and urged lawmakers to restore funding for biological research efforts at USGS.

[Read the letter here.](#)

USGS Director Nominee Sails Through Confirmation Hearing

Senate Committee on Energy and Natural Resources held a hearing on March 6, 2018, to consider the nomination of Dr. James F. Reilly to be the Director of the United States Geological Survey (USGS). Dr. Reilly, a former NASA astronaut and exploration geologist, was nominated by the Trump Administration to lead the agency.

As was expected, Dr. Reilly's confirmation hearing was uneventful and was concluded in less than an hour.

Democratic members of the committee questioned Reilly about the challenges he would have to face once he takes office, including issues related to scientific integrity and budget pressures as a result of the proposed cuts to the USGS budget outlined in the President's request. Reilly repeatedly reassured lawmakers that he would protect the scientific integrity of the agency. He said, "If someone were to come to me and say, 'I want you to change this because it's the politically right thing to do,' I would politely decline." He added, "I'm fully committed to scientific integrity."

Senator Maria Cantwell (D-WA), ranking member of the committee, inquired about the recent departure of two geologists from the agency following a controversial request for energy information from Interior Secretary Ryan Zinke. The former USGS officials claimed that Zinke breached scientific integrity when he asked for information on the energy potential within the National Petroleum Reserve-Alaska before it was officially published. Reilly responded, "I always felt I had a responsibility to deliver information to my leadership, particularly if it had an impact in how the leadership was supposed to respond to it...with the understanding that the leadership would hold it as tight as I would."

President Trump has proposed a 21 percent cut to the USGS budget for FY 2019, with big cuts for climate science and agency staffing. When asked about how he would deal with these budget changes, Reilly answered, "The first thing I would do when I get there is I would spend the first 30 days really just talking to everybody in the mission areas, and then finding out where are the places we can cut without seeing any significant impacts."

Reilly also faced questions from regarding home-state issues ranging from invasive species problems in Minnesota to oil drilling-related issues in Louisiana.

In all likelihood, Dr. Reilly will be confirmed to lead the USGS. Senator Lisa Murkowski (R-AK), chairwoman of the committee, said, "It's good to finally have a geologist nominated to head the USGS."

Reilly currently serves as a technical adviser and subject matter expert on space operations at the U.S. Air Force's National Security Space Institute in Colorado Springs, Colorado. He worked at NASA for 13 years where he flew three Space Shuttle missions, conducted 5 spacewalks, and logged over 856 hours in space, with his work primarily focused on assembling the International Space Station. Before NASA, he worked as an exploration geologist at Enserch Exploration, Inc., an oil-and-gas company based in Dallas, Texas. Reilly has also served as an administrator in academia and held management positions at TAEUS Corporation and PhotoStencil Corporation in Colorado Springs. He earned his Ph.D. in geosciences from the University of Texas at Dallas.

Participate in the BCoN Survey: Harnessing Biodiversity Collections Data for Addressing National Challenges

The Biodiversity Collections Network (BCoN) is requesting participation in a survey intended to elicit information for a stakeholder vision of how to maximize the value of biodiversity collections data for collections management, research and education in the future. BCoN is coordinating the development of this vision in response to requests from NSF and others to inform the development of a new funding program to succeed NSF's current ADBC program. The effort will culminate in a workshop in October 2018 where we will consolidate the feedback into a strategic plan for 2020-2030. The strategic plan, to be issued in early 2019, will be available for public comment and edited accordingly before it is finalized.

Hopefully this strategic plan will provide a framework for a new NSF funding program, much as the [Network for Integrated Biocollections Alliance Strategic Plan](#) (NIBA) influenced the original development of [Advancing Digitization of Biological Collections](#) (ADBC) funding program, which began in 2011. Since that time, ADBC has funded 20 Thematic Collection Networks (TCNs), which are collaborative digitization projects focused on a particular set of research questions. Collectively the TCNs have digitized specimens from 561 collections held in 336 institutions and has provided training and work experience for a broad range of students and emerging professionals. The ADBC program has also provided continual support to University of Florida and Florida State University for hosting Integrated Digitized BioCollections (iDigBio; DBI-1115210; DBI-1547229), the organizing unit for the digitization effort. iDigBio provides training in digitization, data mobilization and the use of collections data in research and education and shares digitized data through its [iDigBio Portal](#) that has over 105 million specimen records and 22 million media records from 1650 record sets.

Additionally, NSF has funded a number of recent initiatives that make use of the data generated through ADBC and address the goals of the NIBA plan. These include but are not limited to the following: Biodiversity Literacy in Undergraduate Education (BLUE; DBI 1730526), BiotaPhy (DBI 1458466), Kurator (DBI 1356438, DBI 1356751), Morphosource (DBI- 1661386), the Paleobiology Database Project (PBDB; EAR 0949416), and The Whole Tale (OAC 1541450).

[Participate in the survey.](#)

Budget Accord Offers Opportunity to Increase Federal Science Funding

On February 9, 2018, Congress approved a two-year budget plan that would increase authorizations for federal spending. The agreement passed in the Senate (71-28) and House (240-186) and was signed into law by President Trump. The bipartisan agreement raised the caps on defense and nondefense discretionary spending by nearly \$300 billion over two years, with nondefense discretionary spending - the biggest source of research funding - getting a \$63 billion boost in fiscal year (FY) 2018 and an additional \$68 billion in FY 2019.

Congress has yet to complete work on FY 2018 appropriations, however. Appropriations legislation is the legislative vehicle that actually provides funding for government operations.

Almost all agencies, including the National Science Foundation (NSF), the Environmental Protection Agency (EPA), the National Aeronautics and Space Administration (NASA), and the National Institutes of Health (NIH), funded under the discretionary budget might now be able to receive modest budget increases if Congress chooses to appropriate additional funding.

Representative Tom Cole (R-OK), a senior member of the Appropriations Committee said, “We are not handing these increases out uniformly and some areas will get cuts, it’s not like everyone is going to be spared by this.”

Senate lawmakers have proposed a \$2 billion increase in the NIH budget for FY 2018, \$1 billion more than the level proposed by the House. The new agreement tags a \$2 billion increase in NIH’s budget over two years. The agency would get another \$500 million from the 21st Century Cures Act in 2018.

NSF might also receive a bump in funding from the deal. The House had earlier proposed to keep NSF’s budget flat in 2018. However, Representative John Culberson (R-TX), chairman of the Appropriations Subcommittee on Commerce, Justice, and Science that funds NSF, indicated that he would consider increasing the budget if the spending caps were raised.

Representative Ken Calvert (R-CA), chairman of the House Interior, Environment and Related Agencies Subcommittee, indicated that many EPA grant programs would get a “strong look” for increased funds. These might include State and Tribal Assistance grants, Water Infrastructure Finance and Innovation Act grants and Diesel Emission Reduction Act grants. He also expressed concern about capital spending accounts being severely cut in recent years to help cover operating costs and indicated interest in raising capital funding for overdue Interior Department projects.

There is bipartisan support in the House for restoring some of the funding for Advanced Research Projects Agency-Energy projects on the Energy and Water spending bill. Senate appropriators would like to see an 8 percent increase in the agency’s annual budget.

Infrastructure programs in rural water, wastewater, clean and safe drinking water, rural broadband, energy, and surface transportation could receive an increase of about \$20 billion over two years. Senator Lisa Murkowski (R-AK), chairman of the Energy and Natural Resources Committee and the Interior and Environment Appropriations Subcommittee, stated that the additional funds would be appropriated to these programs later.

Congressional appropriators are currently working on an omnibus appropriations bill. Federal agencies will continue to operate under FY 2017 levels through March 23, 2018. If an appropriations package has not been passed by March 23, the government will once again face another shutdown.

Trump's FY 2019 Budget Request Proposes Cuts to Science, Addendum Creates Confusion

The Trump Administration's fiscal year (FY) 2019 budget request proposes deep cuts to major research agencies and calls for cancelling several federal research programs, including energy research programs, climate and environmental science programs, and several National Aeronautics and Space Administration (NASA) satellites.

Confusion ensued after an addendum was released along with the proposal reversing the Administration's position on some of the cuts. The twenty-six-page supplemental document requests Congress to maintain level funding for some of the research agencies facing deep cuts in the original proposal. The addendum was added after Congress reached a budget deal to allow \$150 billion in more spending than the FY 2019 caps.

The original proposal was prepared before the budget deal requiring the White House to stick to the spending caps. After Congress lifted the caps on government spending, White House officials decided to reverse course and add a supplemental document. The proposal calls for deep cuts to science and research funding, including a 21% cut to basic research, a 27% cut to the National Institutes of Health (NIH), a 29% cut to the National Science Foundation (NSF), and a 22% cut to the Department of Energy (DOE)'s Office of Science. However, the addendum reverses some of these cuts by requesting funding at 2017 levels for NIH (\$34.8 billion), NSF (\$7.5 billion) and DOE'S science programs (\$5.4 billion).

Other research programs were not as fortunate. The President's request would eliminate DOE's Advanced Research Projects Agency-Energy program, reduce the Environmental Protection Agency's budget to its lowest levels since the 1990's, axe climate-change research at the National Oceanic and Atmospheric Administration, and cut research funding at the U.S. Geological Survey. The proposal would also kill five NASA earth science missions and the Wide Field Infrared Survey Telescope, an orbiting observatory designed to study dark energy and exoplanets.

Congress is yet to approve the spending numbers for FY 2018 with lawmakers largely rejecting some of the proposed deep cuts to research agencies so far. The President's budget request does

not account for all of the \$150 billion in additional cash allowed by Congress to spend in FY 2019, giving congressional appropriators freedom to add to the research budget if they decide.

NSF Releases FY 2019 Budget Details

The National Science Foundation (NSF) released detailed information regarding its budget request to Congress for fiscal year (FY) 2019 on February 28, 2018. The administration's budget request for the agency is \$7.47 billion, a decrease of \$32 million (0.4 percent) from 2017 enacted levels.

Under the proposed budget, NSF would accelerate its "10 Big Ideas for Future Investments," allocating support to high-priority areas that integrate science and engineering fields and create partnership opportunities with industry, private foundations, other federal agencies, and the education sector. The agency would provide \$30 million to each of the six research-focused Big Ideas, that include Understanding the Rules of Life (URoL): Predicting Phenotype; Navigating the New Arctic (NNA); The Future of Work at the Human Technology Frontier (FW-HTF); and Harnessing the Data Revolution (HDR), among others, for a total of \$180 million. The remaining four, aimed at enhancing processes to improve U.S. science and engineering, would receive \$102.5 million. Additionally, NSF would invest \$60 million in two Convergence Accelerators directed towards HDR and FW-HTF in FY 2019 to "leverage resources across the agency to support the most innovative science."

NSF's request would provide \$738 million in spending for the Directorate of Biological Sciences (BIO), a decrease of \$4 million from 2017. BIO provides 69 percent of federal funding for basic non-medical biological research at academic institutions. Within the request for BIO, funding would be allocated towards the five divisions as follows:

- Molecular and Cellular Biosciences: \$137.7 million (+0.5 percent)
- Integrative Organismal Systems: \$185 million (-14.2 percent)
- Environmental Biology: \$146.2 million (+0.5 percent)
- Biological Infrastructure: \$175.1 million (+34.4 percent)
- Emerging Frontiers: \$94.2 million (-17.2 percent)

Spending priorities for BIO would focus on URoL, National Ecological Observatory Network (NEON), and Understanding the Brain (UtB), which includes the BRAIN initiative. URoL, first introduced in 2017, would continue to emphasize research on relationships between genotype and phenotype in plants, animals, and microbes in FY 2019. NEON is scheduled to complete construction in fall 2018, at which point the BIO directorate would assume responsibility for funding all on-going operations and oversight. NEON would receive \$65 million in FY 2019, an increase of almost \$15 million from FY 2017, with their operations and maintenance funding included in the budget for the division of Biological Infrastructure.

NSF's cross-disciplinary initiatives would remain flat or decline in FY 2019. Innovations at the Nexus of Food, Energy, and Water Systems (INFEWS), which supports research on the natural, social, and human-built factors involved in these interconnected systems, would receive \$16.4 million, a 70.6 percent decrease from FY 2017. This is because of a planned decrease in

activities and support for INFEWS-related research being moved to Big Ideas and programs across the agency. The NSF Innovation Corps, which improves researchers' access to resources that help transfer knowledge to downstream technological applications, would receive \$30 million (+0.5 percent).

The Long-Term Ecological Research (LTER) network would receive \$29.1 million (-6 percent). Graduate research fellowships would be cut by 15.3 percent to \$270 million and support for NSF's Research Traineeship program would be decreased by 1.4 percent to \$52.1 million.

The Education and Human Resources (EHR) Directorate would receive flat funding at \$837.4 million. Within EHR, the division of graduate education would receive \$256 million (-5 percent) and the division of undergraduate education would receive \$224.65 million (-2 percent). Support for human resource development would increase by 25 percent to \$187.2 million. NSF's investments in the STEM workforce would be cut by 10 percent to \$423 million.

Major Research Equipment and Facilities Construction (MREFC) would receive \$94.6 million, a 57.5 percent decrease from FY 2017. The request for MREFC includes funding to continue construction of two telescopes, the Daniel K. Inouye Solar Telescope and the Large Synoptic Survey Telescope, as well as two Regional Class Research Vessels, which provide scientific infrastructure to enable better understanding of the impacts of storm surges and tsunamis; natural resource identification and extraction; and fisheries and aquaculture.

President's Budget Would Cut USGS by 21 Percent

President Trump's FY 2019 budget request has called for the United States Geological Survey (USGS) to be funded at \$860 million, a 21 percent cut from the fiscal year (FY) 2017 level.

Funding for the water resources mission area would be reduced by 23 percent to \$165 million, with the Water Resources Research Act program being entirely eliminated. The administration's budget would also reduce support for natural hazards by 19 percent to \$117 million. These include programs to monitor earthquakes and volcanoes, which would each be slashed by 21 percent. Other mission areas would also see deep cuts, with the budget for ecosystems reduced to \$96.1 million (-40 percent), core science systems reduced to \$92.3 million (-20 percent), and science support programs reduced to \$89.3 million (-15 percent).

The 40 percent cut to the ecosystems accounts would significantly reduce the agency's ability to conduct biodiversity-related research and efforts to inform sound conservation and natural resource stewardship decision-making by other federal, state, and local agencies. Within the ecosystems mission area, most programs would face significant cuts. The status and trends program would be funded at \$11.3 million (-45 percent), fisheries program would be funded at \$9.7 million (-54 percent), wildlife program would receive \$33.4 million (-27 percent), and environments program would receive \$24.6 million (-34 percent). The invasive species program would receive almost flat funding at \$17.1 million. Funding for the Cooperative Research Units and museum collections, which supports the Biological Survey Unit (BSU), would be zeroed out. BSU is a group of six USGS scientists stationed at the Smithsonian Institution's National

Museum of Natural History that maintains an extensive collection of bird, reptile, and mammal specimens and has a budget of \$1.6 million.

The President's plan would allocate \$84 million to the energy and mineral resources programs, a 15 percent increase from the 2017 level, while providing no funds for the environmental health program. The plan also includes a new "administrative initiative to help spur critical mineral resource development" for economic growth and national security.

The agency's current "climate and land use change program" would be restructured and renamed to "land resources", which would focus on land imaging, land change science and climate change adaptation. The plan would provide \$13 million in funding for only three out the eight regional climate science centers and one national climate adaptation center, presumably closing the other centers. This is \$4.4 million below the level proposed for 2018, and less than 50 percent of 2017 enacted levels. Climate science centers are responsible for developing science and tools to address effects of climate change on land, water, wildlife, fish, ecosystems and communities.

The plan would also provide \$73 million to support satellite operations, including continuing ground system development for launching Landsat 9 in partnership with the National Aeronautics and Space Administration in 2021. The budget provides \$112 million for facilities, an increase of \$12 million over the 2017 level. The increase would be allocated to relocation of some activities from the Menlo Park campus to Moffett field, California, a part of the NASA Ames Research Center to facilitate collaboration between the agencies.

Lawmakers Race to Replace Retiring Appropriations Committee Chairmen

Senate Appropriations Chairman Thad Cochran (R-MS) announced his resignation from Congress because of health reasons. Cochran, a seven-term senator, will end a four-decade long congressional career on April 1, 2018.

Cochran stated that he planned his departure based on the conclusion of work on the fiscal year 2018 omnibus spending package that has a March 23 deadline to pass. Governor Phil Bryant (R-MS), will name an interim senator to take Cochran's place until the November elections.

The next most senior Republican member on the spending panel, Senator Richard Shelby (R-AL), is expected to replace Cochran as the chairman. The final decision will be approved by a vote of the full Senate GOP conference.

Shelby, a sixth-term lawmaker, currently leads the Commerce, Justice and Science Appropriations Subcommittee and has tried to direct more funding towards the National Aeronautics and Space Administration facilities in his state. In the past, he has avoided ideological debates over federal spending on climate change-related issues. Shelby is widely considered a dealmaker with a record of using his position on the Appropriations Committee to direct federal dollars to his home state.

Earlier this year, Representative Rodney Frelinghuysen (R-NJ), the chairman of the House Appropriations Committee, also announced that he would retire from Congress at the end of this term. Several lawmakers are scrambling to replace him, including Representatives Kay Granger (R-TX), Robert Aderholt (R-AL), Mike Simpson (R-ID), and Tom Cole (R-OK).

Aderholt currently leads the Agriculture Appropriations Subcommittee and would be next in line based on seniority for the top position on the Committee. He supports cutting discretionary funding and his comments also indicate that he may not support a resurrection of earmarks. Granger is the current head of the Defense Appropriations Subcommittee and is attempting to become the first woman to lead the Appropriations Committee. Aderholt and Granger have been in Congress for 11-terms.

Simpson, a ten-term member of the House of Representatives, heads the Energy and Water Appropriations Subcommittee and has regularly supported riders rolling back environmental rules. He previously served as chairman of the Interior and Environment Appropriations Subcommittee. Cole, in his eighth term, currently serves as the chairman of the Labor, Health and Human Services, and Education Appropriations Subcommittee. He is regarded as a pragmatist and has opposed cutting EPA's budget by a third as proposed by the Trump Administration.

The House Republican caucus will not select the top Republican on the Appropriations Committee until the next session of Congress convenes in January 2019, assuming the party retains its House majority.

The Natural Science Collections Alliance is a Washington, D.C.-based nonprofit association that serves as an advocate for natural science collections, the institutions that preserve them, and the research and education that extend from them for the benefit of science, society, and stewardship of the environment. NSC Alliance members are part of an international community of museums, botanical gardens, herbariums, universities, and other institutions that house natural science collections and utilize them in research, exhibitions, academic and informal science education, and outreach activities. Website: www.NSCAlliance.org.

The NSC Alliance Washington Report is a publication of the NSC Alliance. For information about membership in the NSC Alliance, please contact dbosnjak@aibs.org.