President Trump's Fiscal Year 2019 Budget Proposal to Congress
"Efficient, Effective, Accountable: An American Budget"

On February 12, President Trump released his administration's fiscal year 2019 budget proposal to Congress called "Efficient, Effective, Accountable: An American Budget." The proposal, which includes an addendum to account for new discretionary spending caps enacted by Congress last week, would set overall spending at $4.4 trillion. The blueprint would also add $984 billion to the federal deficit next year, despite proposing $1.8 trillion in cuts to federal entitlement programs such as Medicaid, Medicare and food stamps. The centerpiece of the proposal is a plan to increase infrastructure spending by $200 billion over the next decade. The White House Office of Management and Budget (OMB) has posted the full budget proposal here.

As expected, the budget prioritizes defense and border security spending and proposes significant cuts to key research and education agencies. However, in a surprise move, the administration rescinded many steep cuts to research agencies in its 26-page budget addendum. This is because the two-year budget deal (Bipartisan Budget Act) enacted by Congress and approved by President Trump last week provides an extra $85 billion for defense and $68 billion for nondefense discretionary funding in 2019. The administration's original request proposed a 21 percent cut to overall basic research; a 27 percent cut to the National Institutes of Health (NIH); a 29 percent cut to the National Science Foundation (NSF); and a 22 percent cut to the Department of Energy's Office of Science – cuts that were withdrawn in the supplemental documentation.

Mirroring its 2018 budget blueprint, the President's 2019 budget request to Congress once again proposes terminating DOE's Advanced Research Projects Agency-Energy (ARPA-E), the National Endowment for the Humanities (NEH), Supplemental Educational Opportunity Grants (SEOG) for low-income students, and NASA's Office of Education, which operates the Space Grant program. The budget would also significantly reduce climate science research at the National Oceanic and Atmospheric Administration (NOAA), as well as research programs at the Environmental Protection Agency (EPA).

A handful of national associations and science coalitions, in which CU Boulder participates, have released statements expressing concern about the budget's impacts on federal research and education programs. Here are a couple of examples:

- Association of American Universities (AAU) statement
- Association of Public and Land-grant Universities (APLU) statement

As a reminder, the President's budget is a blueprint that outlines the administration's funding and policy priorities but is also largely symbolic. It's generally ignored by Congress, which owns federal budgeting authority and is unwilling to cede this power to the executive branch. Congress rejected similar cuts to research and education programs last year and topline numbers for many research accounts are expected to grow as appropriators finalize their work on fiscal year 2018 spending bills now that a budget agreement is in place. As a reminder, the federal government has been operating under a series of Continuing Resolutions (CR) since October, the latest of which expires on March 23.

Following are initial budget highlights for the federal agencies of interest to CU Boulder. Please note that the level of detail varies by agency based on the information released to the public at this time. This is a preliminary analysis and we will continue to update this summary document as needed. As the budget process continues, the Office of Government Relations will work closely with our Colorado congressional lawmakers and other allies to protect the agencies and programs critical to our research, education and public service missions.
DEPARTMENT OF EDUCATION
The administration is requesting $63.2 billion for education appropriations in FY19, a $3.6 billion (5 percent) cut from the 2017 enacted level. Many of the proposed reforms nod to policy priorities in the PROSPER Act (H.R. 4508), the House's higher education reauthorization bill, including simplifying student aid and loan repayment programs. The 2019 budget eliminates, consolidates, or reduces funding for 39 discretionary education programs. Higher education programs proposed for elimination include:

- Supplemental Educational Opportunity Grants (SEOG);
- International Education and Foreign Language Studies (Title VI);
- Teacher Quality Partnership (TQP) grants; and
- Graduate Assistance in Areas of National Need (GAANN).

In addition, the budget would significantly modify several other programs. Specifically, it would:

- Consolidate the Gaining Early Awareness Readiness for Undergraduate Programs (GEAR-UP) into a $950 million revised TRIO state block grant program, a combined cut of $350 million from the 2017 enacted level;
- Reform the "poorly-targeted" Federal Work Study (FWS) program to "support workforce and career-oriented training opportunities for low-income undergraduates;" and
- Consolidate five income-driven repayment (IDR) plans into a single plan, which would cap a borrower's monthly payment at 12.5 percent of discretionary income and allow for forgiveness after 15 years of repayment for undergraduate student debt and 30 years for graduate student debt.

The budget further proposes to eliminate Public Service Loan Forgiveness (PSLF) and Subsidized Stafford loans for undergraduate students, both of which are also targeted for elimination in the PROSPER Act. These student loan program reforms would cut $203 billion over ten years. The budget appears to grandfather existing borrowers and students in a current program of study, with the new provisions taking effect on all other loans starting in July 2019.

Of the six major themes in the administration's education budget, three are relevant to higher education:

1. Creating new and alternative pathways to successful careers for students;
2. Promoting innovation and reform around STEM education by providing $200 million in new grants; and
3. Making the Education Department more efficient and "limiting the federal role in education."

Student Aid programs:
- **Pell Grants:** The budget level funds Pell at $22.5 billion in discretionary funding and maintains the maximum award of $5,920. It also expands Pell recipients' eligibility to include "high quality, short-term programs that provide students with a credential, certification, or license in an in-demand field."

Campus-Based Aid programs:
- **Supplemental Educational Opportunity Grant (SEOG):** The President's budget once again proposes eliminating SEOG because it is "largely duplicative of the Pell Grant programs and does not deliver need-based aid in the most targeted method." SEOG is also poised for elimination in the PROSPER Act. Eliminating SEOG would reduce $1 million in need-based federal grant aid to CU Boulder students.
- **Federal Work-Study (FWS):** Requests $500 million, a $489.7 million cut from the 2017 enacted level for FWS. The administration also proposes to "dramatically reform" the program to allocate funding to institutions enrolling high numbers of Pell recipients that support workforce and career-oriented opportunities for undergraduates.

Other programs:
- **Institute of Education Sciences (IES):** Requests $521.6 million, a $97 million cut from 2017 enacted amount, for IES – the research and statistics arm of the Department of Education. The
proposal would also cut $14 million from the agency's budget for research, development, dissemination, and statistics.

- **TEACH Grants**: Requests $39.9 million, a $113.4 million cut from the 2017 enacted level for TEACH Grants. The TEACH Grant program awards annual grants of up to $4,000 to students who agree to serve as full-time teachers in mathematics, science, foreign language, bilingual education, special education or reading at a high-need high school for at least four years.

- **Office for Civil Rights (OCR)**: Requests $107.4 million, a $0.3 million cut from the 2018 CR level, for OCR. The requested funds would ensure essential program support to resolve complaints of discrimination and ensure that institutions receiving federal student aid are in compliance with civil rights laws.

**Budget Caps Addendum**: Of note, the administration modified its budget request for five education programs in response to the budget caps deal enacted by Congress last week. Three of the five programs the President prioritized for increases in the budget addendum are postsecondary programs, which include TRIO (a $400 million bump to $950 million) and FWS (a $300 million bump to $500 million). The budget addendum also eliminates the proposed cancellation of $1.6 billion of unobligated balances in the Pell Grant program.

*Additional information on ED's budget request is available [here](#).*

**DEPARTMENT OF HEALTH AND HUMAN SERVICES**

The administration is requesting $64.8 billion for HHS, a $17.9 billion (21 percent) decrease from the 2017 enacted level. Notable budget highlights include:

- **National Institutes of Health (NIH)**: The administration is requesting $35.517 billion for NIH in 2019. This includes funding for the *21st Century Cures Act*; consolidating three existing agencies (Agency for Healthcare Research and Quality; National Institute for Occupational Safety and Health; and National Institute on Disability, Independent Living, and Rehabilitation Research) within NIH; and $750 million ($350 million of which is for research) to support NIH's participation in HHS-wide efforts to fight the opioid crisis. Notably, much of the added opioid program funding would replace existing grant programs. The administration had planned to request substantial cuts to NIH in 2019, then reversed its decision and provided $9.2 billion in additional funds, which became available under the budget deal signed by the President last week.

*Additional information on NIH's budget request is available [here](#).*

**DEPARTMENT OF COMMERCE**

The administration is requesting $9.8 billion, a $546 million (6 percent) increase, from the 2017 enacted level for the Department of Commerce. Key budget highlights include:

- **National Oceanic and Atmospheric Administration (NOAA)**: Requests $4.562 billion for 2019, a $1.075 cut from the 2018 CR level for NOAA. The budget prioritizes development of polar orbiting satellites to sustain robust weather forecasting capabilities. It also provides $450 million for investments in R&D in 2019, but recommends terminating the NOAA Office of Education and Sea Grant Program.
  - Climate Research: Requests $98.643 million in Climate Research activity, a decrease of $53.939 million, and elimination of the Climate Program Office (CPO). The administration also requests decreases of $8.472 million from Regional Climate Data and Information and $39.782 from Climate Competitive Research to eliminate competitively funded climate research. *This will reduce funding for NOAA's Cooperative Institutes (CIs), universities, NOAA research laboratories and other partners in the area of climate research*. With the remaining climate funding, OAR will preserve the following activities: Earth System Research within OAR laboratories; National Integrated Drought Information Systems (NIDIS); Long-
term observations and climate records; R&D associated with Seasonal to Subseasonal atmospheric research; and legislatively mandated work on the National Climate Assessment.

- **National Institutes of Standards and Technology (NIST):** The budget recommends terminating federal funding for the Manufacturing Extension Partnership (MEP) program and directs MEP centers to transition to non-federal revenue sources.

### DEPARTMENT OF DEFENSE
The administration is requesting $597 billion for DOD's base budget with an additional $89 billion for the Overseas Contingency Operations (OCO) account, which is not subject to congressional mandated spending caps, for a total budget of $686 billion in 2019. The request includes $90.6 billion, an $18.3 billion (25.3 percent) increase, for defense Research, Development, Test, and Evaluation (RDT&E) activities. Additional budget highlights include:

- **DOD 6.1 Basic Research:** $2.269 billion, a $7 million reduction from the 2017 enacted level
- **DOD 6.2 Applied Research:** $5.1 billion, a $215 million reduction from the 2017 enacted level
- **DOD 6.3 Advanced Technology Development:** $6.29 billion, a $146 million reduction from the 2017 enacted level
- **DOD Science & Technology (S&T):** $13.66 billion, a $369 million reduction from the 2017 enacted level
- **Defense Advanced Research Projects Agency (DARPA):** $3.438 billion, a $498.8 million increase from the 2017 enacted level

DARPA is a big winner in this budget. The administration's proposal provides $350 million more for DARPA than both House and Senate appropriators did in 2018. In addition, defense S&T continues to take a backseat to more applied research initiatives, particularly Advanced Component Development & Prototypes (6.4) and Operational Systems Development (6.7).

*DOD has not yet released all of its budget documents. Additional information on DOD's budget request is available* [here](#).

### DEPARTMENT OF ENERGY
The administration is requesting $30.6 billion for DOE. Secretary Perry said the budget proposal prioritizes the acceleration of transformative early-stage research and development, with a reliance on the National Labs. Budget highlights include:

- **DOE Office of Science:** The administration proposes flat funding the Office of Science at $5.391 billion. According to DOE, the budget proposal maintains $2.2 billion (40 percent) of the Office of Science's budget for research, including $578 million for administration priorities such as exascale and quantum computing. In addition, the request allocates $2.1 billion to operate the National Labs. Highlights for Office of Science programs include:
  
  - Advanced Scientific Computing Research: $899 million
  - Basic Energy Sciences (BES): $1.85 billion
  - Biological and Environmental Research: $500 million
  - Fusion Energy Sciences: $340 million
  - High Energy Physics: $770 million
  - Nuclear Physics: $600 million
  - Science Laboratory Infrastructure: $127 million
  - Security and Administration: $286 million
  - Workforce Development for Teachers and Scientists: $19 million

- **Advanced Research Projects Agency-Energy (ARPA-E):** The President's budget once again proposes eliminating ARPA-E. The agency would continue to monitor the existing loan portfolio and oversee existing awards to completion. According to Dr. Eric Rohlfing, Acting Director of ARPA-E, *Colorado is the #4 recipient of ARPA-E funds nationwide.*
• **Office of Energy Efficiency and Renewable Energy**: Requests $696 for EERE, a $1.3 billion cut from the 2017 enacted level. DOE says EERE funds will focus on early stage R&D energy technologies including new approaches to energy storage beyond current battery technologies.

• **Office of Nuclear Energy**: Requests $757 for Nuclear Energy, a $259 million cut from the 2017 enacted level, prioritizing support for advanced manufacturing methods, instrumentation, and reactor technologies, including $54 million for advanced Small Modular Reactor R&D.

• **Office of Fossil Energy**: Requests $502 million for Fossil Energy R&D, an $81 million increase over the 2017 enacted level.

• **National Nuclear Security Administration (NNSA)**: Requests $15.1 billion for the NNSA, a $2.2 billion increase over the 2017 enacted level.

**Other Budget Highlights:**

- **Exascale computing system**: Developing exascale computing software systems remains a priority for the administration in FY19. It is requesting $636 million, a $376 million increase above the 2017 enacted level, to achieve exascale computing by 2021. Of this total, DOE would allocate $473 million to the Office of Science and $163 million to NNSA.

- **Quantum Computing**: The administration is also requesting $105 million for quantum computing and quantum sensor technology.

- **Cybersecurity**: Of the $470 million requested for cybersecurity, DOE would reserve $75 million for electric grid and energy sector cybersecurity R&D.

- **Other**: The administration is requesting $432 million for specific, cutting-edge, early-stage R&D efforts in energy storage solutions beyond batteries; advanced fossil-based power systems; and advanced reactor technologies including Small Modular Reactors.

Additional information on DOE’s budget request is available [here](#).

**INDEPENDENT AGENCIES**

- **National Aeronautics and Space Administration (NASA)**: The administration is requesting $19.892 billion for NASA, a 1 percent increase over the 2017 enacted level. The budget provides $10.5 billion for an exploration campaign focused on the moon and development of a commercial space economy. Budget highlights include:

  • **Science Mission Directorate**: Requests $5.895 million, a $130.1 million (2 percent) increase over the 2017 enacted level. Highlights for SMD programs include:

    - **Earth Science**: Requests $1.784 million for Earth Science and again proposes to terminate CLARREO Pathfinder, as well as PACE, OCO-3 and DSCOVR Earth-viewing instruments.
    - **Planetary Sciences**: Requests $2.234 million with a focus on the Mars 2020 rover (2020 launch) and Europa Clipper (2025 launch).
    - **Astrophysics**: Requests $1.185 million to support the launch of the James Webb Space Telescope in 2019. The request also proposes to terminate the Wide Field Infrared Survey Telescope (WFIRST) “due to its significant cost and higher priorities elsewhere in NASA.”
    - **Heliophysics**: Requests $690.7 million to support the DRIVE initiative and research to improve space weather observation, forecasting and modeling.

  • **Aeronautics Mission Directorate**: Requests $633.9 million, a $26.1 million decrease from the 2017 enacted level.

  • **Office of Education**: The President’s budget once again requests the termination of the Office of Education and its programs, which include Space Grant, and redirects these funds to “NASA’s core mission of exploration.” NASA will continue to support “other education activities, such as internships and fellowships funded by the mission directorates.”

Additional information on NASA’s budget request is available [here](#).
• **Environmental Protection Agency (EPA)**: Requests $5.4 billion for EPA, a $2.8 billion (34 percent) decrease from the 2017 enacted level. The budget provides $246 million for EPA to continue R&D activities in support of core mission areas, focusing on air quality, water resources, sustainable communities, chemical safety, and human health risk assessment.

• **National Endowment for the Humanities (NEH)**: The President's budget once again proposes eliminating NEH, with a request for $42.3 million in wind-down funding.

• **National Science Foundation (NSF)**: The administration is requesting that NSF be flat-funded at $7.47 billion in FY19. The administration increased its request for NSF by $2.204 billion as a result of the congressional budget deal signed by the President last week. Absent a spending caps deal the administration would have only requested $5.3 billion for the agency. Budget highlights include:

  - **Research & Related Activities Directorate**: Requests $6.151 billion for Research & Related Activities, a $145 million (2 percent) bump over the 2017 enacted level. NSF plans to invest in priority areas including NSF's "10 Big Ideas" with an emphasis on accelerating cross-disciplinary efforts around two Big Ideas: "The Future of Work at the Human-Technology Frontier" and "Harnessing the Data Revolution." NSF also plans to begin construction on the Antarctic Infrastructure Modernization for Science project.

  - NSF will provide more details on its budget request at a later date. In a statement, Director Córdova said under the FY19 budget "NSF will continue its support for groundbreaking research in the areas of computer science, biology, engineering, geoscience, mathematics, the physical sciences, and the social sciences."

  *Additional information on NSF’s budget request is available [here](#).*