On March 11, President Trump released his administration's fiscal year 2020 budget proposal to Congress called "A Budget for a Better America: Promises Kept. Taxpayers First," which outlines the administration's federal funding priorities for next fiscal year. The budget release was delayed over one-month, due in part to an historic 34-day partial government shutdown, which shuttered the White House Office of Management and Budget (OMB), which prepares the annual request. The budget blueprint released today is not complete and a detailed appendix and congressional justifications are not expected until next week.

The President's budget includes $2.7 trillion in proposed spending cuts, the steepest cuts proposed by any administration in history. It also adheres to discretionary spending caps imposed by the Budget Control Act (BCA) of 2011. Over the next two-years, the budget caps will reduce federal discretionary spending by $225 billion. In FY20, the caps will reduce federal outlays by $126 billion, including $55 billion in cuts to non-defense accounts such as research and education programs, and $71 billion in cuts to defense accounts. The President's budget sidesteps the brunt of the BCA's cuts to defense spending by providing additional resources from Overseas Contingency Operations (OCO), funds which are not subject to the caps.

The FY20 budget prioritizes border security and proposes $8.6 billion for a border wall. It also invests in national defense, combating the opioid epidemic, healthcare for veterans, and modernizing government technology. Consistent with previous requests, the budget seeks to terminate DOE's Advanced Research Projects Agency-Energy (ARPA-E), Supplemental Educational Opportunity Grants (SEOG) for low-income students, and NASA's Office of STEM Engagement, which operates the Space Grant program. OMB has posted the budget proposal here.

A handful of national associations and coalitions, in which CU Boulder participates, have released statements reacting to the proposal. Here are several examples:

- Association of American Universities (AAU) statement
- Association of Public and Land-grant Universities (APLU) statement
- The Science Coalition (TSC) statement and infographic

As a reminder, the President's budget is a request to Congress that outlines the administration’s funding and policy priorities. It begins the annual federal budget process, but is largely symbolic because it is ignored by Congress, which owns federal budgeting authority and is unwilling to cede this power to the executive branch. In both FY18 and FY19, Congress soundly rejected cuts sought by the administration to federal research and education programs, and in many cases provided significant additional investment for these accounts. Read more from The New York Times: Cut the Science Budget? Not So Fast.

Following the release of the President's budget, the Congressional Budget Office (CBO) will submit economic and budget reports to congressional budget committees in both the House and Senate, who will then hold hearings, question administration officials, and draft a budget resolution.

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 in support of the agencies and programs critical to our research, education and public service missions.
DEPARTMENT OF EDUCATION
The administration is requesting $64 billion for education appropriations in FY20, a $7.1 billion cut from the 2019 enacted level. The proposal includes $1.5 billion for higher education programs aimed at improving student achievement and increasing access to high-quality education. Consistent with previous requests, higher education programs proposed for elimination include:

- Federal Supplemental Educational Opportunity Grants (FSEOG);
- International Education and Foreign Language Studies (Title VI);
- Teacher Quality Partnership (TQP) grants;
- Fund for the Improvement of Postsecondary Education (FIPSE), which administers the Open Textbook Pilot Program;
- Graduate Assistance in Areas of National Need (GAANN);
- Subsidized Stafford loans; and
- Public Service Loan Forgiveness (PSLF).

Student Aid programs:
- Pell Grants: The budget level funds Pell at $22.475 billion in discretionary funding and maintains the maximum award of $6,195. CU is requesting a $150 increase to the maximum Pell award in FY20. Consistent with previous requests, the administration proposes expanding Pell eligibility to "high quality, short-term programs that provide students with a credential, certification, or license in an in-demand field." The request also proposes the cancellation of $2 billion in unobligated balances.

Campus-Based Aid programs:
- Federal Supplemental Educational Opportunity Grants (FSEOG): Consistent with previous budgets, the administration proposes eliminating FSEOG because it is "duplicative" of the Pell Grant program and its allocation formula is "not targeted efficiently."
- Federal Work-Study (FWS): Requests $500 million for FWS, a $630 million decrease from the 2019 enacted level. Consistent with previous requests, the administration proposes reforming the program to support workforce and career-oriented opportunities for low-income undergraduate students.

Student Loan programs:
- Income-Driven Repayment (IDR): Consistent with previous requests, the administration proposes to consolidate multiple IDR plans into a single plan, which would cap borrowers’ monthly payments at 12.5 percent of discretionary income and allow for forgiveness after 180 months of repayment for borrowers with undergraduate debt and after 30 years for borrowers with graduate debt.

Other programs:
- Federal TRIO Programs: Requests $950 million for TRIO, a $110 million decrease from the 2019 enacted level. Consistent with last year’s request, the administration proposes transitioning Federal TRIO Programs from a series of competitive grant programs to a State formula program.
- Institute of Education Sciences (IES): Requests $521.6 million, a $93.9 million decrease from the 2019 enacted level, for IES, the research and statistics arm of the Department of Education. The proposal also requests $187.5 million, a $5.2 million decrease from the 2019 enacted level, for IES research, development, dissemination, and evaluation.
- TEACH Grants: Requests $29.9 million, a $3.1 million decrease from the 2019 enacted level, for the TEACH Grant program, which 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 $125 million for OCR, which is consistent with the 2019 enacted level.

Additional information on ED’s budget request is available here.
DEPARTMENT OF HEALTH AND HUMAN SERVICES
The administration is requesting $87.1 billion for HHS, a $3 billion decrease from the 2019 enacted level. Budget highlights include:

- **National Institutes of Health (NIH):** The administration is requesting $34.368 billion for NIH, a $4.716 billion decrease from the 2019 enacted level. This total includes $492 million in resources available through the 21st Century Cures Act and $150 million in mandatory resources. CU is requesting $41.576 billion for NIH in FY20. Preliminary budget highlights include:
  - $256 million for the new National Institute for Research on Safety and Quality (NIRSQ) to continue key research activities currently administered by the Agency for Healthcare Research and Quality (AHRQ).
  - $1.3 billion for opioid and pain research across NIH as part of the government-wide effort to combat the opioid epidemic.
  - $100 million for the Next Generation Researchers Initiative, which prioritizes meritorious applications that request funding for early stage investigators seeking their first award.

- The budget also highlights NIH’s focus, including convening of a new working group, on the promise of Artificial Intelligence (AI) and machine learning to catalyze advances in basic and clinical research.

NIH’s budget appendix and congressional justifications are not expected until next week, however additional details regarding the NIH proposal are included in HHS’s Budget in Brief document.

DEPARTMENT OF COMMERCE
The administration is requesting $12.2 billion for DOC, a $1 billion increase from the 2019 enacted level, largely to boost investment for the 2020 Decennial Census. Budget highlights include:

- **National Oceanic and Atmospheric Administration (NOAA):** NOAA budget materials, including proposed funding for the Office of Oceanic and Atmospheric Research (OAR), are not yet available. CU is requesting $556 million for OAR in FY20. The budget blueprint requests $1.2 billion to support the development of satellite systems, including polar weather satellites, space weather instruments, and satellite data collection systems, which are vital to keeping America safe and providing space-based observations to improve the accuracy and timeliness of weather predictions. Consistent with previous requests, the administration proposes to eliminate several NOAA grant and education programs, including Sea Grant, Coastal Zone Management grants, and the Pacific Coastal Salmon Recovery Fund.

- **National Institutes of Standards and Technology (NIST):** NIST budget materials are not yet available. Consistent with previous requests, the budget recommends terminating federal funding for the Manufacturing Extension Partnership (MEP) program and directs MEP centers to transition to non-federal revenue sources.

- **Economic Development Administration:** Consistent with previous requests, the budget proposes to eliminate the EDA.

DEPARTMENT OF DEFENSE
The administration is requesting $718 billion for DOD, which is a $33 billion increase from the 2019 enacted level. Focus areas include autonomous systems, hypersonics, and artificial intelligence, including $208 million to scale DOD’s Joint Artificial Intelligence Center. In addition, the newly formed Army Futures Command, which is designed to increase the efficiency of Army modernization by leveraging technology across the enterprise and reducing development time, would be funded at full operating capability. Additional budget details, including proposed funding for defense Research, Development, Test, and Evaluation (RDT&E) activities (e.g. 6.1 Basic Research, 6.2 Applied Research, 6.3 Advanced Technology Development and the Defense Advanced Research Projects Agency) is forthcoming. CU is requesting $16.997 billion for DOD Science & Technology (S&T) 6.1-6.3 in FY20.

DOD has not yet released all of its budget documents. Additional budget details are expected shortly.
DEPARTMENT OF ENERGY
The administration is requesting $31.7 billion for DOE, which is a $3.985 billion decrease from the 2019 enacted level. The budget expresses support for DOE’s 17 national laboratories, including the National Renewable Energy Laboratory (NREL) in Golden, CO, and requests $118 million to modernize aging lab infrastructure. Budget highlights include:

- **DOE Office of Science (SC):** Requests $5.5 billion for SC, a decrease of over $1 billion from the 2019 enacted level. CU is requesting $7 billion for SC in FY20. Highlights for Office of Science programs are not yet available.

- **Advanced Research Projects Agency-Energy (ARPA-E):** For the third year in a row, the administration proposes eliminating ARPA-E and integrating some components of the program into DOE’s applied energy research programs. Each of the last two years, Congress has rebuffed this proposal and increased funding for ARPA-E to $355 million in FY18 and $366 million in FY19. CU is requesting $400 million for ARPA-E in FY20.

- **Office of Energy Efficiency and Renewable Energy (EERE):** Requests $343 million for EERE and proposes to use $353 million in prior year balances for a total of $696 million, a $1.683 billion decrease from the 2019 enacted level.

- **Office of Nuclear Energy:** Requests $824 million for Nuclear Energy, a $502 million decrease from the 2019 enacted level.

- **Office of Fossil Energy:** Requests $562 million for Fossil Energy R&D, a $178 million decrease from the 2019 enacted level.

- **National Nuclear Security Administration (NNSA):** Requests $16.5 billion for the NNSA, a $1.272 billion increase of over the 2019 enacted level.

Other Budget Highlights:

- **Artificial Intelligence (AI):** Requests $119 million, including $71 million for SC and $48 million for the NNSA, to improve the robustness, reliability, and transparency of Big Data and AI technologies, as well as quantification and development of software tools for DOE mission applications.

- **Exascale computing:** Requests $809 million, including $500 million for SC and $309 million for the NNSA, which will enable the deployment of an Exascale computer system in calendar year 2021.

- **Quantum Computing:** Requests $168 million for SC to understand how quantum systems behave and to address scientific challenges beyond the capabilities of classical computers.

- **Other:** The administration is requesting $25 million for next-generation microelectronics and $20 million for genomic sciences for SC.

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

INDEPENDENT AGENCIES

- **National Aeronautics and Space Administration (NASA):** The administration is requesting $21 billion for NASA, a $500 million decrease from the 2019 enacted level. The centerpiece of the NASA budget request is $363 million for the space agency to work with industry on developing a large lunar lander to carry both cargo and astronauts to the moon’s surface.

  - **Science Mission Directorate (SMD):** Requests $6.303 billion for SMD, a $602 million decrease from the 2019 enacted level. CU is requesting $7.5 billion for SMD in FY20. Budget request highlights for SMD programs include:
    
    - **Earth Science:** Requests $1.779 billion for Earth Science, a $151 million decrease from the 2019 enacted level. The proposal also seeks to cancel two unnamed Earth Science missions. Consistent with prior budgets, those missions are expected to be CLARREO Pathfinder and PACE. Both missions were targeted for cancellation by the administration in 2018 and 2019, but preserved by Congress.
    
    - **Planetary Sciences:** Requests $2.622 billion for Planetary Sciences, a $136 million decrease from the 2019 enacted level. The budget also seeks approximately $600 million
for a mission to Jupiter’s moon Europa that would launch in 2023 and would also initiate
a mission to return samples from Mars.

- Astrophysics: Requests $1.197 billion for Astrophysics, a $299 million decrease from the
  2019 enacted level. Consistent with prior budgets, the proposal provides no funding for
  the Wide-Field Infrared Survey Telescope (WFIRST), the next flagship astronomy
  mission after the James Webb Space Telescope.
- Heliophysics: Requests $704.5 million for Heliophysics, a $15.5 million decrease from the
  2019 enacted level.

- Aeronautics Mission Directorate: Requests $666.9 million for Aeronautics, a $58 million
decrease from the 2019 enacted level.
- Office of Science, Technology, Engineering, and Mathematics (STEM) Engagement: For
  the third time, the budget seeks to end funding for NASA’s Office of STEM Engagement, the new
  name of the Office of Education, and its programs, which include Space Grant. However, the
  budget would continue to support internships and robotics competitions funded outside of the
  Office of STEM Engagement.

Additional information on NASA’s budget request is available here.

- Environmental Protection Agency (EPA): The budget blueprint does not address the EPA.
- National Endowment for the Humanities (NEH): The budget blueprint does not address the NEH.
  CU is requesting $167.5 million for NEH in FY20.
- National Science Foundation (NSF): The administration is requesting $7.1 billion for the NSF, a
  nearly $1 billion decrease from the 2019 enacted level. CU is requesting $9 billion for the NSF in
  FY20. Budget highlights for NSF Directorates are not yet available.

Sources: White House Office of Management & Budget, Department of Education, Politico Pro, New York
Times, Space News