

APLU Analysis of the Trump Administration's FY2021 Budget

This document is an initial analysis of the administration's fiscal year (FY) 2021 budget request for the various agencies and programs of interest to APLU institutions. As further materials are released, APLU staff will update the budget analysis document and the [FY2021 appropriations priorities chart](#).

APLU released a [statement](#) expressing deep concern and opposition to proposed cuts and elimination of higher education and research programs within the president's budget request.

BROAD OVERVIEW OF THE FY2021 PRESIDENT'S BUDGET REQUEST (PBR)

The FY2021 president's budget request (PBR), [A Budget for America's Future](#), proposes \$4.4 trillion in projected spending cuts over the next 10 years. The request would allow defense spending to rise by \$2.5 billion next year, to \$740.5 billion, as called for in last summer's bipartisan budget deal. However, the PBR proposes to cut nondefense discretionary spending instead of allowing for an increase of less than 1 percent. Trump's request includes only \$600 billion for nondefense spending, which amounts to a cut of roughly 5 percent from the Fiscal Year 2020 level of base nondefense discretionary spending.

Much like previous PBRs, this budget proposes eliminating a number of APLU priority higher education and research programs, including Supplemental Educational Opportunity Grants, GEAR UP, Title VI International Education, and the Advanced Research Projects Agency-Energy. Within accounts, the PBR prioritizes artificial intelligence, quantum information sciences, advanced manufacturing, biotechnology, and 5G. The budget proposes large increases for key industries, including doubling AI and quantum information sciences R&D by 2022 as part of an all-of-government approach.

The administration's FY2021 [budget documents](#) provide additional information.

Below is information collected from the budget request about programs of interest, in alphabetical order by department/agency. This analysis uses the FY2020 enacted levels as a comparison to the PBR FY2021 numbers.

DEPARTMENT OF AGRICULTURE (USDA)

The President's Budget Request for FY2021 prioritizes a modern data network system across USDA, competitive and biodefense research, 4-H and agricultural literacy, and innovations like artificial intelligence development for agriculture. The budget request boosts the budget for USDA's National Institute of Food and Agriculture (NIFA) by 11% overall, or by \$95 million, to \$968 million.

Unfortunately, the budget would significantly cut the fundamental capacity programs that keep research stations functioning, provides cooperative funding for county Extension offices, allows for a core group of research and Extension faculty to be employed, furthers basic and applied research for our national forests and supports basic facilities running at the nation's Land-Grant Universities including 1890 Institutions, and 1994 Tribal Colleges:

- Hatch Act (State Agricultural Experiment Stations): FY2021 PBR is \$243M, a 6% cut (FY2020 \$259M)
- Smith Lever (Extension Activities): FY2021 PBR is \$299M, a 5% cut (FY2020 \$315M)
- Evans-Allen (1890s Research and Education): FY2021 PBR is \$54M, a 19.4% cut (FY2020 \$67M)

- 1890 Institutions Extension Services: FY2021 PBR is \$49M, a 14% cut (FY2020 \$57M)
- McIntire-Stennis Cooperative Forestry: FY2021 PBR is \$29M, a 19% cut (FY2020 \$36M)
- Research Grants for 1994 Institutions: FY2021 PBR is \$4M, a 5% increase

It prioritizes competitive research through the Agriculture and Food Research Initiative (AFRI), supporting it at \$600 million, a \$175 million (41% increase) over FY2020 enacted. This includes \$100 million for artificial intelligence (AI) programs to support emerging technologies such as machine learning as applied to agriculture and to enhance application of advanced technology in agricultural systems across all scales of production.

The USDA budget supports the Administration's initiative to promote excellence and innovation at Historically Black Colleges and Universities (HBCUs) by including \$10 million for scholarships for students studying agriculture at historically black land-grant institutions. The budget request doesn't specify levels for competitive grants for facilities and the Agricultural Genome to Phenome Initiative.,

The Budget proposes \$1.3 billion for USDA's Agricultural Research Service (ARS), which conducts in-house basic and applied research. This includes funding for the National Bio- and Agro-Defense Facility, currently near completion in Manhattan, Kansas. This state-of-the-art facility will provide the United States the ability to conduct comprehensive research, develop vaccines, and provide enhanced diagnostic capabilities to protect against emerging foreign animal and zoonotic diseases that threaten the nation's food supply, agricultural economy, and public health. Also, at ARS is the \$35 million for new initiatives on precision agriculture research, long-term agroecosystems research, artificial intelligence innovations for agriculture production, and research on managing excess water and controlling erosion.

USDA's FY2021 [budget document](#) provides additional information.

DEPARTMENT OF COMMERCE

The FY2021 Budget requests \$7.9 billion for Commerce, a \$7.3 billion or 48% decrease from the 2020 enacted level, including changes in mandatory programs.

Economic Development Administration

The PBR would provide \$31 million in funding to eliminate the Economic Development Administration (EDA). The Regional Innovation Program, within the EDA, received \$33 million in FY2020.

National Institute for Standards and Technology (NIST)

The PBR would eliminate the Manufacturing Extension Partnership (MEP) program at the National Institute of Standards and Technology. The PBR would provide \$25 million, an increase of \$9 million over FY2020, for National Network for Manufacturing Innovation (NNMI), or Manufacturing USA, in FY2021. The justification notes: "Manufacturing USA, previously referred to as the National Network for Manufacturing Innovation, serves to create effective robust manufacturing research infrastructure for U.S. industry and academia to solve industry-relevant problems. The Manufacturing USA consists of linked Institutes for Manufacturing Innovation with common goals, but unique concentrations. In an institute, industry, academia, and government partners leverage existing resources, collaborate, and co-invest to nurture manufacturing innovation and accelerate commercialization. The Budget proposes to initiate a second NIST-funded Manufacturing USA institute while discontinuing dedicated Federal funding to the first institute."

National Oceanic and Atmospheric Administration (NOAA)

The president requests \$327M for NOAA Oceanic and Atmospheric Research (OAR), a 40% cut from FY2020 enacted levels (\$548M). OAR programs provide climate, weather, air chemistry, ocean and coastal research and

technology with applications across NOAA's mission. To accomplish these goals, OAR supports a network of scientists in its federal research laboratories, universities, and cooperative institutes and partnership programs.

While only the [appendices](#) have been released, the [Commerce summary](#) notes the president's budget proposes elimination of funding for several "lower priority" NOAA programs, including "Sea Grant, Coastal Zone Management Grants, Education Grants, and the Pacific Coastal Salmon Recovery Fund". Per the request, "these grant programs generally support State, local, and/or industry interests, and often are not optimally targeted." The budget does provide \$188 million for mapping of the ocean's vast resources to identify new sources of critical minerals, biopharmaceuticals, and energy, and areas of significant ecological and conservation value. We are awaiting additional detail from NOAA as the week unfolds.

The Department of Commerce's FY2021 [budget document](#) provides additional information.

DEPARTMENT OF DEFENSE (DoD)

The PBR would fund DoD Science and Technology (6.1-6.3) at \$13.911 billion, a 13.46% decrease from FY2020 enacted levels. The budget proposes \$2.319 billion for DoD Basic Research, a 10.91% decrease from FY2020. The DoD's [R-1 programs document](#) includes funding levels for specific research development, test, and evaluation programs. Almost all accounts that APLU tracks received steep cuts in the PBR:

Agency/Account	Item	FY2020	FY2021 PBR	FY2021 PBR – FY20 Enacted % Change
Army RDT&E	Defense Research Sciences	354,480	303,257	-14.45%
Army RDT&E	University Research Initiatives	87,858	67,148	-23.57%
Army RDT&E	University and Industry Research Centers	127,164	87,877	-30.89%
Navy RDT&E	University Research Initiatives	167,850	166,816	-0.62%
Navy RDT&E	Defense Research Sciences	463,829	467,158	+0.72%
Air Force RDT&E	Defense Research Sciences	356,107	315,348	-11.45%
Air Force RDT&E	University Research Initiatives	178,859	161,861	-9.5%
Defense-Wide RDT&E	DTRA Basic Research Initiatives	26,000	14,617	-43.78%
Defense-Wide RDT&E	Basic Research Initiatives	70,874	35,565	-49.82%
Defense-Wide RDT&E	National Defense Education Program	144,074	100,241	-30.42%
Defense Wide RDT&E	Defense-Wide Manufacturing S&T Technology Program	197,397	93,817	-52.47%
DHP RDT&E	Undistributed Medical Research/ Peer-Reviewed (CDMRPs)	1,615,600	0	-

Under the PBR, the Defense Advanced Research Projects Agency (DARPA) would receive \$3.556 billion, a \$108 million increase over FY2020.

DoD's FY2021 [budget document](#) provides additional information.

DEPARTMENT OF EDUCATION (ED)

The budget request would provide \$66.6 billion in funding for the Department of Education, \$5.6 billion below the FY2020 level, an 8 percent cut in education funding.

The budget would maintain the discretionary appropriation of the Pell Grant program at \$22.475 billion and retain the maximum Pell award of \$6,345. Fortunately, the PBR does not include any rescissions to the Pell Grant program reserve. The PBR proposes expanding Pell Grant eligibility to “high-quality” short-term programs that lead to a credential, certification, or license in a high-demand field and restoring Pell eligibility to some incarcerated individuals, specifically those within five years of likely release. The PBR also proposing moving Iraq and Afghanistan Service Grants into the Pell Grant program.

For campus-based aid programs, the PBR would eliminate the **Supplemental Educational Opportunity Grant (SEOG)** program and significantly cut Federal Work Study (FWS) from \$1.1 billion to \$500 million. The request would “focus scarce funds on the neediest students,” reforming the funding formula to take into greater consideration an institution’s enrollment of Pell students. The proposal would also target the program to support workforce and career-oriented opportunities and restrict program funds to undergraduate students.

The PBR proposes to drastically restructure most **Title III and V programs**, with an overall reduction in funding to MSIs totaling approximately \$95.4 million. Under the proposal, programs for Historically Black Colleges and Universities (HBCUs) and Tribally Controlled Colleges and Universities (TCCUs) would be maintained and funding would largely stay the same or see modest increases. Alternatively, programs for other Minority Serving Institutions, including all three programs supporting Hispanic-Serving Institutions (HSIs), would be eliminated. Instead, funds for those 11 eliminated programs would be merged into a single Consolidated Minority-Serving Institutions (MSI) Grant that would make formula-based awards to institutions serving large numbers of minority students.

Under the PBR, all **TRIO and GEAR UP** programs would be consolidated into a single block grant program, the TRIO Student Supports Block Grant program, which would receive \$950 million. Activities currently funded under the College Assistance Migrant Program (CAMP), which makes competitive grants to support migratory students in their first year of college, would also be consolidated into the new block grant program. Under this proposal, TRIO funding would see a reduction of \$160 million from FY2020, \$365 million in GEAR UP funding would be eliminated, and funds supporting activities funding through CAMP would be eliminated. In total, the block grant proposed in the PBR would cut more than \$545 million in funding dedicated to helping students prepare, enroll, and succeed in postsecondary education.

Further, the PBR eliminates funding for **Graduate Assistance in Areas of National Need (GAANN), International Education and Foreign Language Studies programs (Title VI)**, Funds for the Improvement of Postsecondary Education (FIPSE), and Teacher Quality Partnerships.

The PBR requests \$565.4 million for the **Institute of Education Sciences**, \$58.1 million less than the FY2020 level. The request would specifically eliminate funding for Regional Education Laboratories at IES, which support the dissemination of IES-funded research, as well as technical assistance for states. The PBR would also eliminate competitive grant funding to states for developing Statewide Longitudinal Data Systems.

In addition to these funding priorities, the PBR advances a range of policy proposals impacting the Federal student aid programs. First, the PBR proposes an evaluation of the Office of Federal Student Aid (FSA) as a separate organization with a reformed governance structure. The administration argues that an independent FSA could significantly increase FSA’s ability to serve students and taxpayers, and that this new governance

model would improve its management, oversight, and administration of the Federal student aid programs.

For student borrowing, the proposal would set aggregate loan limits on both graduate student and parent borrowers. Parent PLUS loans would be capped at \$26,500. For dependent students whose parents reach this cap, those students would be eligible to borrow an additional amount up to the independent undergraduate aggregate limit of \$57,500. Annual and aggregate limits of \$50,000 and \$100,000 respectively would be set for graduate students, not counting any undergraduate student borrowing.

The PBR would also make significant changes to the student loan programs and student loan repayment. First, the administration proposes providing one loan option to each type of borrower—undergraduates, graduates, and parents. Through this change, all undergraduate students would be made under the unsubsidized Stafford Loan program, all graduate borrowing would occur under one program with the same terms as the current Graduate PLUS program, and parent borrowing would remain the same, subject to the aggregate cap described above. Subsidized loans for undergraduate students would be eliminated. The PBR also proposes eliminating Account Maintenance Fees (AMFs) made to guarantee agencies.

The PBR proposes simplifying income-driven repayment (IDR) by consolidating existing plans into a single option, setting monthly payments at 12.5 percent of discretionary income and eliminating the standard repayment cap for borrowers. Under this proposed IDR plan, undergraduate borrowers would be eligible for forgiveness after 15 years while graduate students would be eligible after 30 years. Severely delinquent borrowers would be auto enrolled into the IDR plan, which the administration says will eliminate default for low-income students. While teacher loan forgiveness programs would be retained, Public Service Loan Forgiveness (PSLF) would be eliminated.

Finally, the PBR would require institutions of higher education to take on some of the financial risk associated with federal student loans. This institutional risk sharing would be based on the loan repayment rates at each college and university.

ED’s [FY2021 budget document](#) provides additional information.

DEPARTMENT OF ENERGY (DOE)

The PBR would fund DOE’s Office of Science at \$5.8 billion, a more than \$1 billion cut from FY2020. The budget directs the office to focus on early-stage research, operate the national laboratories, and continue high priority construction projects. Below is a chart summarizing Office of Science funding in the FY2021 PBR as compared to FY2019 and FY2020 enacted levels.

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	FY 2019 Enacted	FY 2020 Enacted	FY 2021 Request	FY 2021 Request vs FY 2020 Enacted	
				\$	%
Office of Science					
Advanced Scientific Computing Research	935,500	980,000	988,051	+8,051	+0.8%
Basic Energy Sciences	2,166,000	2,213,000	1,935,673	-277,327	-12.5%
Biological and Environmental Research	705,000	750,000	516,934	-233,066	-31.1%
Fusion Energy Sciences	564,000	671,000	425,151	-245,849	-36.6%
High Energy Physics	980,000	1,045,000	818,131	-226,869	-21.7%
Nuclear Physics	690,000	713,000	653,327	-59,673	-8.4%
Workforce Development for Teachers and Scientists	22,500	28,000	20,500	-7,500	-26.8%
Science Laboratory Infrastructure	232,890	301,000	174,110	-126,890	-42.2%
Safeguards and Security	106,110	112,700	115,623	+2,923	+2.6%
Program Direction	183,000	186,300	190,306	+4,006	+2.2%
Total, Office of Science	6,585,000	7,000,000	5,837,806	-1,162,194	-16.6%

For the fourth year in a row, the administration's FY2020 budget proposes elimination of the Advanced Research Projects Agency Energy (ARPA-E) program, citing the "opportunities to integrate the positive aspects of ARPA-E into DOE's applied energy research programs including through changes to the implementation of the Small Business Innovation Research and Small Business Technology Transfer (SBIR/STTR) program." ARPA-E was funded at \$425 million in FY2020.

DOE's FY2021 [budget document](#) provides additional information.

DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS)

For the National Institutes of Health (NIH), the FY2021 PBR proposes \$38.7 billion, a 7.19% decrease from FY2020 enacted levels. This figure includes \$404 million made available through the 21st Century Cures Act. As outlined in the PBR, the request incorporates investments to address several national priorities, "including combatting the opioid epidemic, eradicating HIV, supporting neonatal research, developing novel approaches to treating sickle cell disease, supporting the Childhood Cancer Data Initiative, increasing investments to develop a universal influenza vaccine, improving prevention and treatment of tick-borne diseases, continuing the precision medicine initiative, developing new approaches to address chronic disease with artificial intelligence, and establishing a consortium charged with innovating large-scale gene vector production."

Similar to the FY 2018, 2019, and FY2020 PBRs, the Agency for Healthcare Research and Quality (AHRQ) would be consolidated into NIH as a new institute, the National Institute for Research on Safety and Quality.

The budget request proposes the elimination of diversity pipeline and primary care training programs, as well as a decrease for nursing workforce development programs. Specifically, the PBR would provide \$250 million for Health Resources Services Administration (HRSA) Title VII and Title VIII programs. In FY2020, HRSA Title VII and VIII programs received \$743.5 million for current and new programs.

HHS' FY2021 [budget document](#) provides additional information.

DEPARTMENT OF THE INTERIOR (DOI)

The PBR restructures USGS from seven to five mission areas. The restructuring of the mission areas zeroes out the U.S. Geological Survey (USGS) Water Resources Research Institutes and the USGS Cooperative Fish and Wildlife Research Units.

The budget cuts hazards science by \$32 million from the enacted level of \$171 million in FY2020. Hazard science informs a broad range of disaster planning, situational awareness and response activities at local to global levels. APLU will continue to evaluate how the suggested restructure and budget request would impact key research, cooperative funding, and geographically relevant programs within USGS moving forward.

The PBR includes funding for the Joint Fire Science Program (JFSP) at \$3 million. It is unclear if any funds are available through USDA's Forest Service program.

DOI's FY2021 [budget document](#) provides additional information.

ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA's FY2021 Annual Performance Plan and Budget of \$6.658 billion represents a \$2.399 billion or 26% percent reduction from the Agency's FY2020 enacted budget level. The president requests \$484.7 million for the Office

of Science and Technology, a 32% decrease in funding below FY2020 enacted. The funds requested would support research and development activities, necessary expenses of personnel and related costs and travel expenses, procurement of laboratory equipment and supplies, and other operating expenses in support of research and development. However, the budget request eliminates the Science to Achieve Results (STAR) Program across all program project areas within the Science and Technology portfolio.

EPA'S FY2021 [budget document](#) provides additional information.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

The PBR requests \$25.5 billion for NASA, a 12% increase from FY2020. NASA's budget provides increases for the "Moon-to-Mars campaign" and allocates funding to support many systems and programs needed to fulfil the Artemis timeline to have an American "on the lunar surface in 2024."

Within APLU priorities, NASA Science Mission Directorate would be funded at \$6.306 billion, a \$599 million decrease from FY2020. The budget proposal would provide \$819 million for the Aeronautics Research and Development Directorate, a \$94 million increase from FY2020. The PBR renames the Space Technology account as "Exploration Technology" to "better reflect the new focus of this account on supporting the Exploration Campaign." The PBR would fund Exploration Technology at \$1.578 billion, \$651 million above FY2020 enacted levels. No funding is requested for NASA STEM Engagement Program, where the Space Grant program is housed. This program received \$48 million in FY2020.

NASA's FY2021 [budget document](#) provides additional information.

NATIONAL ENDOWMENT FOR THE HUMANITIES (NEH)

The PBR requests \$33.4 million to close the agency, stating that "Activities funded by NEH are not considered core Federal responsibilities." The agency received an appropriation of \$162.3 million in FY2020.

NATIONAL SCIENCE FOUNDATION (NSF)

The PBR requests \$7.7 billion for NSF, a 7% decrease from FY2020 enacted levels. NSF's FY2021 request supports the administration's "Industries of the Future" research and development priorities. The budget focuses additional NSF support on artificial intelligence, quantum information science, advanced manufacturing, advanced wireless research, and biotechnology research.

Specifically, the budget proposes \$6.213 billion for NSF Research and Related Activities, \$524 million below the FY2020 level. NSF Major Research Equipment and Facilities Construction would receive \$229.75 million under the request, which is \$13.48 million below current levels. The PBR proposes \$930.93 million for Education and Human Resources, a \$9.07 million decrease from FY2020.

NSF's FY2021 [budget document](#) provides additional information.

DEPARTMENT OF STATE (STATE) AND U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT (USAID)

The FY2021 budget requests \$40.8 billion for the Department of State and USAID, an \$11.7 billion or 22 percent decrease from the 2020 enacted level.

Within the section outlining suggested language for the FY2021 USAID appropriation, USAID Higher Education receives flat funding of \$235 million. Higher Education Partnerships between U.S. higher education institutions and developing countries are provided not less than \$35 million in support. Per the request, partnerships should focus on building the capacity of higher education institutions and systems in developing countries. The Feed the

Future program is not mentioned in any of the materials related to the budget or the congressional justification.

The budget request for USAID emphasizes protecting the United States and the World from Infectious Disease Through the Global Health Security Agenda (GHSA) and Global Health Programs. The 2021 Budget requests \$2,160.1 million in the GHP-USAID account for a comprehensive and integrated approach to improve global health outcomes.

Also of note, the budget request proposes a 52 percent reduction in funding for the Department of State's Educational and Cultural Exchange programs, despite repeated acknowledgement of the importance of these programs within the PBR given the administration's concerns with global competition.

The budget requests \$3.9 million for the Benjamin A. Gilman Scholarship program, a \$12 million decrease from FY2020 enacted. The State Department's justification documents note that the requested funding for Gilman will provide 700 Pell grantees with the opportunity to "acquire first-hand knowledge of key regions of the world and to master the skills to compete in the international marketplace."

USAID's FY2021 [budget document](#) provides additional information.