

FY2019 Appropriations Priorities COMMERCE, JUSTICE, SCIENCE, & RELATED AGENCIES

ABOUT THE ASSOCIATION OF PUBLIC AND LAND-GRANT UNIVERSITIES

APLU is a research, policy, and advocacy organization dedicated to strengthening and advancing the work of public universities.

With a membership of 237 public research universities, land-grant institutions, state university systems, and affiliated organizations, APLU's agenda is built on the three pillars of increasing degree completion and academic success, advancing scientific research, and expanding engagement.

Annually, its 196 U.S. member campuses enroll 4 million undergraduates and 1.2 million graduate students, award 1.1 million degrees, employ 1.1 million faculty and staff, and conduct \$40.8 billion in university-based research.

APLU 1307 New York Avenue NW Suite 400 Washington, DC 20005 p: 202.478.6040 www.aplu.org

NATIONAL SCIENCE FOUNDATION (NSF)

APLU FY2019 Request: \$8.456 billion1

(FY2019 PBR = \$7.472B; FY2018 = TBD; FY2017 = \$7.472B)

The NSF funds merit-based research across disciplines and supports science, math and engineering education across the country, including at APLU universities in all 50 states and the U.S. territories. APLU supports an appropriation of \$8.456 billion for NSF in FY2019, which represents a 4% percent real-growth increase in funding from the research community's request of \$8 billion for FY2018, and would help provide the necessary investments for development of new innovations and our global economic competitiveness. The requested increase of 4% real growth is consistent with the first recommendation in the clarion call-to-action, <u>Innovation: An American Imperative</u>, which more than 500 organizations from all 50 states representing industry, academia, and scientific and engineering societies have endorsed. The statement has received bipartisan and bicameral support and enthusiasm.

The United States risks falling behind as economic competitors like China recognize the value of research and science grow their investments in these areas. The 2018 Science and Engineering Indicators Report shows that competitor nations are rapidly improving their global position in science and technology while the U.S. is resting on its laurels of past investments. The <u>report</u> indicates that China is poised to become the global leader in S&T in the next few years. The United States must ramp-up our investments in scientific research supported by NSF if we intend to remain competitive and at the forefront of science, technology and innovation.

Robust funding across accounts and research areas will help accelerate NSF's "Ten Big Ideas" framework, a bold, long-term agenda for the U.S. science and research enterprise. Further, strong funding for NSF will help prevent an innovation deficit and build a better America, as science and technological advances are the foundation of our nation's economic growth and aid in our national defense.

APLU FY2019 COMMERCE, JUSTICE, SCIENCE APPROPRIATIONS PRIORITIES (con't)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

Science Mission Directorate¹

APLU FY2019 Request: \$6.2 billion

(FY2019 PBR = \$5.895B; FY2018 = TBD; FY2017 = \$5.765B)

The NASA Science Mission Directorate is an essential part of meeting the growing challenges to fully understand global changes to the Earth and answer fundamental questions regarding the universe through space exploration. NASA Science includes Earth Science, Planetary Science, Astrophysics, the James Webb Space Telescope and Heliophysics. APLU recommends funding of at least \$6.2 billion for NASA Science in FY2019, a five percent increase over FY2017 levels.

Aeronautics Research Directorate APLU FY2019 Request: \$712 million¹

(FY2019 PBR = \$634M; FY2018 = TBD; FY2017 = \$660M)

APLU recommends funding of \$712 million for the Aeronautics Research Directorate (ARD) which supports cutting-edge aviation research. Continued investment in research such as hypersonics, new methods of propulsion, and material science are crucial to push the envelope of civilian aeronautics, and these discoveries are routinely leveraged for the benefit of the space program. Increased funding will help ensure a comprehensive aviation research effort at ARD and the U.S.'s leadership as the global aeronautics leader.

Space Technology Directorate

APLU FY 2019 Request: \$796 million¹

(FY2019 PBR = N/A; FY2018 = TBD; FY2017 = \$687M)

The Space Technology Directorate supports innovative research and technology development, including through grants to researchers at APLU institutions, needed for current and future NASA missions. The scientific knowledge gained from the Space Technology Directorate has led to advancements that improve the lives of all Americans, such as the development of cutting-edge medical devices including pacemakers and Lasik eye surgery, increased agricultural production, and development of improved military protective armor. APLU recommends funding this important directorate at \$796 million. Further APLU does not support the President's FY2019 budget proposal to integrate the Space Technology directorate into a new Exploration Research and Technology directorate.

National Space Grant College and Fellowship Program APLU FY 2019 Request: \$48 million¹

(FY2019 PBR = 0; FY2018 = TBD; FY2017 = \$40M)

The National Space Grant College and Fellowship Program is a national network of universities working together to support and expand science and engineering education related to aerospace. APLU recommends funding Space Grant at \$48 million for FY2019 and supports past Congressional directives to limit the administrative fees of each program within the NASA Education Office at five percent.

APLU FY2019 COMMERCE, JUSTICE, SCIENCE APPROPRIATIONS PRIORITIES (con't)

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

Office of Oceanic and Atmospheric Research APLU FY 2019 Request: \$549 million¹

(FY2019 PBR = \$322M; FY2018 = TBD; FY2017 = \$514M)

The Office of Oceanic and Atmospheric Research (OAR) provides the research foundation for understanding the complex systems that support our planet. NOAA funds crucial science related to our oceans and atmosphere that provides decision makers with critically important data and services which enhance the nation's economy, security, and environment. Further, OAR supports critical environmental research that helps communities better predict, plan for, and rebound from severe weather events. This research helps communities build resiliency, reducing impact and recovery time after a catastrophic event. APLU supports \$549 million for OAR in FY2019.

National Sea Grant College Program (including Marine Aquaculture Program) APLU FY2019 Request: \$85 million¹

(FY2019 PBR = 0; FY2018 = TBD; FY2017 = \$72.5M)

The National Sea Grant College Program is a nationwide network of 32 university-based programs that work with coastal communities. Sea Grant engages this network of the nation's top universities in conducting scientific research, education, training, and extension projects designed to foster science-based decisions about the use and conservation of our aquatic resources. The program addresses national priorities at the local level, while identifying citizens' needs to help guide state and national research agendas. APLU urges Congress to provide \$85 million for the National Sea Grant College Program in FY2019.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)

Manufacturing Extension Program (MEP) APLU FY2019 Request: \$142 million¹

(FY2019 PBR = 0; FY2018 = TBD; FY2017 = \$130M)

The Manufacturing Extension Program (MEP) at NIST focuses on increasing the competitiveness of the U.S. industrial base in every state by serving as a catalyst for strengthening American manufacturing. In turn, this helps transform the sector into a more efficient and powerful engine of innovation. The MEP centers are non-profit, university or state-based organizations which provide manufacturers with an array of services that focus on growth, productivity, and efficiency. APLU urges Congress to fund the MEP program in FY2019 at \$142 million.

APLU FY2019 COMMERCE, JUSTICE, SCIENCE APPROPRIATIONS PRIORITIES (con't)

Manufacturing USA
APLU FY2019 Request: \$25 million¹

(FY2019 PBR = 0; FY2018 = TBD; FY2017 = \$25M)

Manufacturing USA, formerly known as the National Network for Manufacturing Innovation (NNMI), is a network of 14 manufacturing institutes where industry, university, and government partners can collaborate to research, develop and accelerate the commercialization of innovative manufacturing technologies. The network is a partnership among seven federal agencies and is coordinated by the Advanced Manufacturing National Program Office at NIST. These institutes also support development and deployment of education and workforce strategies needed to support talent development in advanced manufacturing. Manufacturing USA helps fuel our nation's position as a global leader in advanced manufacturing. APLU recommends \$25 million for Manufacturing USA in FY2019 to help support the program's mission and to fund an additional institute.

ECONOMIC DEVELOPMENT ADMINISTRATION (EDA)

Regional Innovation Program
APLU FY2019 Request: \$50 million¹

(FY2019 PBR = 0; FY2018 = TBD; FY2017 = \$17M)

The Regional Innovation (RI) Program in EDA funds local organizations that are growing jobs and economies through science, technology, innovation and entrepreneurship. Through competitive grants, the program encourages and supports the development of products into businesses. Higher education institutions use these grants to test proof-of-concept for early stage technology, and to support immersion in technology transfer and innovation ecosystems, and growth of their regional economies with targeted innovation.

There is strong interest in this program from across the country. Over the initial three rounds of RI Program awards, the EDA received more than 620 applications from all 50 states as well as DC and Puerto Rico requesting \$245 million in funding and committing \$284 million in private matching funds. To date, EDA has made 98 awards totaling \$39.5 million. The RI Program funds projects that are tailored to the unique needs of the various communities across the U.S. Increased resources for the RI Program would help further cultivate entrepreneurship, grow new startups, and bring new products and ideas to market. APLU supports an appropriation of \$50 million for the Regional Innovation Program in FY2019.