



ASSOCIATION OF
PUBLIC &
LAND-GRANT
UNIVERSITIES

FY 25 APPROPRIATIONS PRIORITIES

COMMERCE, JUSTICE, SCIENCE, & RELATED AGENCIES FINAL REQUEST

AGENCY	ACCOUNT	APLU FY25 FINAL REQUEST
National Science Foundation	National Science Foundation	\$11.9 billion
	Science Mission Directorate	\$9 billion
	Aeronautics Research Directorate	\$1 billion
	Space Technology	\$1.5 billion
	Space Grant Program	\$65 million
National Oceanic and Atmospheric Administration (NOAA)	Oceanic and Atmospheric Research - Operations, Research and Facilities	\$840 million
	Sea Grant	\$145.7 million
	Marine Aquaculture Program	\$18 million
National Institute for Standards and Technology (NIST)	Manufacturing Extension Partnerships	\$275 million
	National Network for Manufacturing Innovation	\$250 million
Economic Development Administration	Build to Scale (formerly Regional Innovation Strategies Program)	\$50 million

NATIONAL SCIENCE FOUNDATION

APLU FY2025 REQUEST: \$11.9 BILLION

FY2025 PBR = \$10.2 BILLION; FY2024 = \$9.060 BILLION; FY2023 = \$9.539 BILLION

The National Science Foundation (NSF) funds merit-based fundamental research across disciplines and supports science, math, and engineering education at universities throughout the nation. NSF-supported research has yielded groundbreaking discoveries and novel technologies – stimulating new industries and enhancing health and national security. For example, NSF-funded research supported technological advancements such as artificial intelligence, nanotechnology, 3-D printing, next generation computer chips, MRI scans, and threat detection devices. APLU supports an appropriation of at least \$11.9 billion for NSF in FY25.

The United States is facing major competition from China and other nations in critical technologies such as AI and quantum, and our nation will lose its leadership if Congress does not do more to expand our research and innovation ecosystem. The bipartisan CHIPS and Science Act demonstrated strong congressional intent for major NSF growth. The law authorizes \$16.7 billion in FY25 to advance these critical technology areas, enable transformational efforts to enhance regional innovation, and increase support for foundational research and education activities. Congress cannot continue the deeply problematic [historic trend](#)¹ of passing ambitious authorizations of science programs but not delivering the needed funding if it expects to fulfill the goals of the legislation.

APLU's request for at least \$11.9 billion for NSF in FY25 would provide a vital boost to NSF's core and interdisciplinary programs, further strategic investments in industries of the future such as AI and quantum computing, enhance critical workforce development programs, move forward with new programs authorized in the CHIPS and Science Act, and support the new Directorate for Technology, Innovation, and Partnership.

There is demonstrated overwhelming need for immediate increased funding at NSF. Every year, NSF must leave a very large number of excellent proposals on the table due to insufficient grant funds. For example, NSF's resource constraints required it to turn away approximately \$4.1 billion in research proposals deemed "very good or higher" in the merit review process in FY21. The recently announced winners of the exciting new Regional Innovation Engines shows the difficult funding decisions NSF must make with scarce resources compared to the potential. The competition started with 188 concept outlines, narrowed to 34 semifinalists, then 16 semifinalists, then only [10 winners](#).

Strong funding levels for NSF will not only lead to new knowledge and technologies, support the U.S. economy, improve our nation's health and well-being, and better safeguard our country from national security threats, it will also support the development of tomorrow's scientific research workforce. We need to ensure a stronger pipeline of Americans studying science, technology, engineering, and mathematics (STEM) and ultimately contributing to our STEM workforce. The CHIPS and Science Act expanded the number and size of critical fellowship and traineeship programs that are our nation's most effective domestic science talent development programs. These programs are essential to countering the dual-pronged concerns that international competitors are enticing U.S. educated talent with foreign resources and that other countries are more effectively developing their own STEM workforces.

The growth of the U.S. economy and our leadership around the world depends on our nation's continued ability to lead in scientific discovery and technological innovation. The latest National Science Board Science and Engineering Indicators report shows China's annual increase of R&D spending has averaged 10.6 percent over the last decade while the United States' annual average increase was only 5.4 percent over the same period. As a result, the share of global R&D the United States performs has declined to 27 percent while China's share has increased to 22 percent.

If the U.S. is to remain at the forefront of scientific discovery, continue leading the world in science and engineering, and reclaim our role as the "uncontested leader," we must invest strategically and robustly.

¹ https://www.aaas.org/sites/default/files/2022-02/AAAS%20COMPETES%20Shortfalls%20Feb%202022_o.pdf

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION (NASA)

SCIENCE MISSION DIRECTORATE

APLU FY2025 REQUEST: \$9 BILLION

FY2025 PBR = \$7.568 BILLION; FY2024 = \$7.334 BILLION; FY2023 = \$7.795 BILLION

The NASA Science Mission Directorate (SMD) is essential to meeting the growing challenges to fully understand global changes to the Earth and answer fundamental questions regarding the universe through space exploration. In addition, new knowledge made possible by the Science Mission Directorate inspires future generations to pursue careers in STEM fields, sustaining U.S. leadership in groundbreaking discoveries. NASA Science includes four distinct divisions: Earth Science, Planetary Science, Astrophysics, and Heliophysics. SMD was specifically highlighted within the CHIPS and Science Act as “critically important” for preparing the next generation of scientists, cutting-edge peer-reviewed research, maximizing scientific returns on taxpayer investments, and creating new and innovative techniques for future missions.

AERONAUTICS RESEARCH MISSION DIRECTORATE

APLU FY2025 REQUEST: \$1 BILLION

FY2025 PBR = \$965.8 MILLION; FY2024= \$935 MILLION; FY2023 = \$935 MILLION

The Aeronautics Research Mission Directorate (ARMD) supports cutting-edge aviation research. Additional investments in research such as hypersonics, new methods of propulsion, and material science are crucial to push the envelope of civilian aeronautics. NASA aeronautics has made decades of contributions to aviation. Every U.S. commercial aircraft and U.S. air traffic control tower has NASA-developed technology that improves efficiency and safety. Research conducted by ARMD directly benefits today's air transportation system, the aviation industry, and the passengers and businesses who rely on aviation every day. Increased funding will help ensure a comprehensive aviation research effort at ARMD and maintain the U.S.'s leadership position as the global aeronautics leader.

SPACE TECHNOLOGY DIRECTORATE

APLU FY2025 REQUEST: \$1.5 BILLION

FY2025 PBR = \$1.181 BILLION; FY2024 = \$1.1 BILLION; FY2023 = \$1.2 BILLION

The Space Technology Directorate supports innovative research and technology development, including through grants to researchers at our nation's research universities, needed for current and future NASA missions. The scientific knowledge gained from the Space Technology Directorate has led to advancements that extend far beyond NASA, improving the lives of all Americans, such as developing cutting-edge medical devices, including pacemakers and Lasik eye surgery, increased agricultural production, and development of enhanced military protective armor.

NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM (SPACE GRANT)

APLU FY2025 REQUEST: \$65 MILLION

FY2025 PBR = \$57 MILLION; FY2024 = \$58 MILLION; FY2023 = \$58 MILLION

Space Grant is a national network of colleges and universities that expands opportunities for Americans to understand and participate in NASA's aeronautics and space projects by enhancing science and engineering education, research, and public outreach efforts. The Space Grant national network includes over 850 affiliates from universities, colleges, industry, museums, science centers, and state and local agencies. These affiliates belong to one of 52 consortia in all 50 states and the District of Columbia. The consortia funds nearly 4,000 fellowships and scholarships for students pursuing STEM careers, curriculum enhancements, and faculty development. The network recruits and trains U.S. citizens, especially women and underrepresented minorities, in aeronautics and space sciences broadening participation in STEM, and strengthening the pipeline of our nation's skilled domestic workforce. Member colleges and universities also administer pre-college and public service education projects in their states.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

OFFICE OF OCEANIC AND ATMOSPHERIC RESEARCH (OAR)

APLU FY2025 REQUEST: \$840 MILLION

FY2025 PBR = \$577 MILLION; FY2024 = \$656 MILLION; FY2023 = \$661 MILLION

The NOAA Oceanic and Atmospheric Research, Operations, Research and Facilities account supports basic research that improves understanding of ocean and atmospheric processes to advance weather predictions and forecasts, ocean acidification and climate change impacts, and sea level changes/dynamics. The NOAA Research network consists of, among other activities, grants programs through the Climate Program Office, external research at Sea Grant universities and programs, and Cooperative Institutes with academia. Recent OAR research

forecasts energy demand scenarios, seasonal wildfires, and large storm events; assessing local impacts of projected sea-level rise; improving seasonal precipitation and drought predictions; and understanding atmospheric rivers and other causes of coastal and inland extreme flooding. Research is translated into information used by private businesses and public sector managers across all levels of business and government.

The Office of Oceanic and Atmospheric Research (OAR) Cooperative Institutes (CI) and extramural research via Sea Grant universities increase the effectiveness of oceans and climate observations, monitoring, modeling, and exploration. Cooperative Institutes, established through an open competition, serve scientific and educational missions, representing strong partnerships between NOAA and the 80 CI-affiliated universities and research institutions spread across 34 states and the District of Columbia. Whether co-located within NOAA laboratories or aligned in geographical consortia nationwide, CIs represent collaborations between scientists in various settings. Through NOAA-sponsored fellowships at partner academic institutions, CIs also provide teaching, training, and mentoring to the nation's future scientists and scientific workforce. These long-term, collaborative research partnerships foster and promote NOAA's scientific discovery and educational capabilities now and in the future. The CIs also provide the public and government with data to make real-time decisions and shape long-term policies that enhance public health and protect commercial and national security interests.

APLU urges support for OAR at \$840 million for FY25 to ensure NOAA's predictive capabilities are fulfilled through continuous improvement of analytical capabilities, networks of experts supported by OAR, and facilities that make advancements possible.

NATIONAL SEA GRANT COLLEGE PROGRAM

APLU FY2025 REQUEST: \$145.7MILLION

FY2025 PBR = \$72 MILLION; FY2024 = \$80 MILLION; FY2023 = \$80 MILLION

A joint federal, state, and local investment, Sea Grant provides solutions for the issues affecting our nation's coastal communities (including the Great Lakes, Gulf of Mexico, and communities on the Atlantic, Caribbean, and Pacific coasts), yielding quantifiable economic, social, and environmental benefits. Sea Grant is a unique university-based program within NOAA that awards over 90 percent of its appropriated funds to coastal states through a competitive process to address issues identified as critical by coastal communities throughout the United States. Federal-university partnerships between NOAA and 34 university-based programs can be found in every coastal and Great Lakes state. APLU requests \$145.7 million for the National Sea Grant College Program in FY25.

Over 127 million residents — 40 percent of the population of the United States — live in coastal counties. These counties employ 56 million people, resulting in \$3.4 trillion in wages annually, and produce more than \$8.3 trillion in goods and services that support coastal and non-coastal communities. Unfortunately, weather- and climate-related hazards impacting these communities have increased at an alarming rate.

The frequency of “sunny day” flooding has doubled since 2000 in the United States with the national median frequency rate likely to increase by two to three times by 2030. Exacerbated by sea level rise, these events overwhelm sewage treatment plants and public utilities, disrupt transportation corridors, reduce property values of homes and businesses, and threaten public health. In addition, fluctuating water levels in the Great Lakes have resulted in millions of dollars of damage and economic impacts. The program will protect lives, sustain critical infrastructure, protect, and restore essential natural resources, enhance economic opportunity, and support more rapid economic recovery after events.

The Sea Grant College Program awards grants and contracts to initiate and support programs at Sea Grant colleges and other institutions for research, education, and advisory services in any field related to the conservation and development of marine resources. Between February 2022 and January 2023, the Sea Grant program helped generate an estimated \$802 million in economic benefits; created or supported 9,600 jobs; created or sustained 1,600 businesses; provided 34 state-level programs with funding that assisted 886 communities in implementing sustainable fishing practices;; helped restore or protect an estimated 2.1 million acres of habitat; and supported the education and training of nearly 2000 undergraduate and graduate students². Sea Grant fosters cost-effective partnerships among state universities, state and local governments, NOAA, and coastal communities and businesses, leveraging \$800 million in economic benefits from a \$89.5 million appropriation by Congress³.

MARINE AQUACULTURE PROGRAM

APLU FY2025 REQUEST: \$18 MILLION

FY2025 PBR = \$0; FY2024 = \$14 MILLION; FY2023 = \$14 MILLION

Aquaculture supplies more than 50 percent of the world’s human consumption of seafood, a percentage that will continue to rise. The Sea Grant Marine and Great Lakes Aquaculture program develops innovations in the aquaculture industry, supports technology transfer, and sustains America’s expanding aquaculture industry. Pressures from a changing climate, rising sea levels, changes in ocean chemistry, and an ever-dynamic industry increase demand for aquaculture breeding, production, and sustainable harvests. Sea Grant’s \$16M investment in FY21 resulted in over \$80M in economic impact and created 408 businesses that employed 1,052 people because of the financial return from developments in aquaculture stocks and management. New solutions, made possible with an investment in the Marine Aquaculture Program of \$18million in FY25, will result in more significant coastal employment, enhance the training and effectiveness of the aquaculture-related workforces, and create opportunities for the growth of aquaculture-based businesses.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)

HOLLINGS’ MANUFACTURING EXTENSION PROGRAM (MEP)

² https://seagrant.noaa.gov/wp-content/uploads/2024/02/Sea-Grant-By-the-Numbers_2024_508.pdf

³ <https://sga.seagrant.org/wp-content/uploads/2021/02/Sea-Grant-College-Program-FY22-Request.pdf>

APLU FY2025 REQUEST: \$275 MILLION

FY2025 PBR = \$175 MILLION; FY2024 = \$175 MILLION; FY2023 = \$175 MILLION

APLU requests \$275 million for the Hollings' Manufacturing Extension Program (MEP) for FY25. Congress showed broad bipartisan support for this important program by expanding the scope of MEP as part of the CHIPS and Science Act.

This program improves the competitiveness of U.S.-based manufacturing by making manufacturing technologies, processes, and services more accessible to small and medium-sized manufacturers. MEP centers are based at university, non-profit, or state-based organizations throughout the nation providing manufacturers with science-based expertise to help them reduce costs, create new products, develop the next-generation workforce, find new markets, and achieve business success. Universities play critical roles in the MEP program. Some host MEP centers serve as a front door to university technology assets. Many universities conduct applied research to solve problems, evaluate potential products, perform testing, or provide a critical flow of talent into small and medium-sized manufacturers. The recently passed CHIPS and Science Act authorized the MEP program to award centers focused on workforce development and supply-chain resiliency and reach out to underserved communities.

The program has grown from a pilot project of just three MEP Centers to one center in every state and Puerto Rico — building a network of organizations to provide manufacturers with a wide array of comprehensive and critical services for their manufacturing business. As a public-private partnership, MEP delivers taxpayers a high return on investment. For example, according to the MEP National Network FY23 survey, over 107,000 jobs were created or retained by the more than 36,000 manufacturers interacting with MEP Centers across the country. In addition, these MEP Center clients reported that MEP assistance led to \$16.2 billion in sales, \$2.9 billion in cost savings, and \$4.8 billion in new client investments.⁴

MANUFACTURING USA (FORMERLY NNMI)

APLU FY2025 REQUEST: \$250 MILLION

FY2025 PBR = \$37 MILLION; FY2024 = \$37 MILLION; FY2023 = \$37 MILLION

NIST's Manufacturing USA is a network of 16 manufacturing institutes where universities, industry, and government partners collaborate to develop and accelerate the commercialization of innovative manufacturing technologies and helps fuel our nation's position as a global leader in advanced manufacturing. Each institute focuses on certain technologies, such as 3-D printing, digital manufacturing, smart manufacturing, and advanced robotics manufacturing.

According to Manufacturing USA's 2023 report [Revitalizing America's Manufacturing Workforce](#), in 2022, the 16 manufacturing innovation institutes collaborated with over 2,500

⁴ <https://www.nist.gov/mep/mep-national-network>

manufacturers, conducted more than 670 applied research and development technology projects, and trained more than 106,000 people in advanced manufacturing.⁵

It is estimated that by 2030 manufacturers will need to fill 4 million manufacturing jobs in the United States. Manufacturing USA identified three priorities to help meet this need: equip the advanced manufacturing workforce with evolving skills; broaden access to advanced manufacturing career pathways; and spark interest in advanced manufacturing careers to secure a steady workforce talent pool. Many institutes provide workforce training opportunities to new and existing manufacturing workers to develop the skills they will need in the newly advanced manufacturing economy. For example, ACMI, a NNMI Institute in partnership with an APLU member institution, created an advanced composites internship program based on experiential learning, mentorship, professional development, and industry collaboration that has provided 119 opportunities for students with 40 partners at 25 different locations such as member companies, national labs, and universities.

APLU requests \$250 million for Manufacturing USA in FY25 to help support the program's mission and fund up to three new institutes as authorized in the CHIPS and Science Act.

ECONOMIC DEVELOPMENT ADMINISTRATION (EDA)

BUILD TO SCALE (B2S)

APLU FY2025 REQUEST: \$50 MILLION

FY2025 PBR = \$50 MILLION; FY2024 = \$50 MILLION; FY2023 = \$50 MILLION

EDA's Build to Scale program (B2S) provides competitively awarded grants to universities, startups, nonprofits, and entrepreneurship-focused organizations that further technology-based economic development initiatives. B2S supports high-quality job growth, improves economic opportunities, and supports the next generation of industries. Through B2S grants, universities and partner organizations leverage federal funds to equip entrepreneurs with the skills to accelerate enterprise growth and access human capital; facilitate connections for startups with new and existing capital providers and enable investors to support regional innovation; and establish replicable and scalable best practices for coordinated public and private economic development initiatives.

There is demonstrated need to increase federal support for this program. In 2023, the EDA awarded grants to 60 organizations totaling \$53 million, but the awardees leveraged an additional \$55 million in matching funds from various private and public sector sources, making

⁵ <https://www.manufacturingusa.com/sites/manufacturingusa.com/files/2023-12/Manufacturing%20USA%20Education%20and%20Workforce%20Development%20Roadmap-FINAL-508-12.19.23.pdf>

this program a successful partnership between the federal government and grantees⁶. APLU requests at least \$50 million for this program to increase the number of awards the EDA can administer and reach the authorized amount for this program.

⁶ <https://www.eda.gov/news/press-release/2023/11/09/us-department-commerce-announces-60-recipients-build-scale-program>