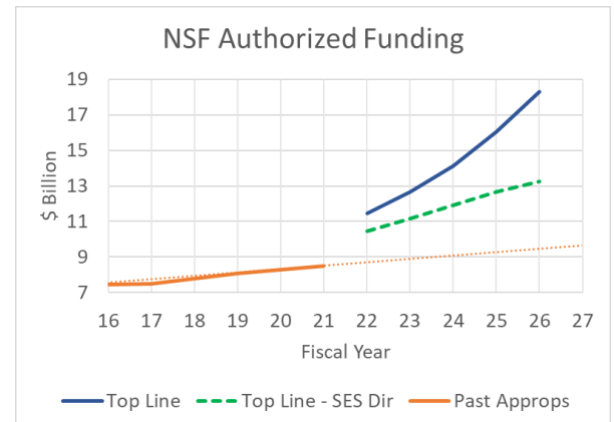


U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON **SCIENCE, SPACE, & TECHNOLOGY**

Summary of the NSF for the Future Act of 2021

Funds more excellent research. The research community has the capacity to pursue far more research ideas than the National Science Foundation (NSF) can fund. In fiscal year 2019, almost \$3 billion in proposals received a fundable, “Very Good” or higher, rating in the merit review process but were nonetheless declined. These unfunded projects represent an enormous untapped potential to create new knowledge and drive innovations that spawn new industries and solve problems for the benefit of the American people. We cannot afford to miss out on these good ideas, particularly in an increasingly competitive global environment. This bill authorizes a significant increase in funding for the agency. Specifically, the bill:



- Increases overall funding for the agency (minus the new directorate) by nearly \$2 billion in fiscal year 2022, to \$10.5 billion, and grows at an average annual rate of 6%, to \$13.3 billion in fiscal year 2026.
- Directs investments in critical research-enabling infrastructure, including a 50% increase to the Mid-Scale Research Infrastructure program, support for helium conservation equipment, and a roadmap for meeting the research community’s growing need for advanced computing capabilities.

Improves STEM education and research training. The country is facing an urgent shortage of STEM workers and research talent that threatens to constrain our innovative capacity and, consequently, our economic prosperity. Broadening the participation and advancement of women and other historically underrepresented groups is critical to an effective strategy for growing the STEM workforce. This bill advances research and development to address persistent challenges at all education levels, including scaling successful models in STEM education and broadening participation in STEM. Specifically, the bill:

- Establishes a new centers program to support translational research and development to help scale up effective PreK-12 STEM education innovations.
- Encourages efforts to align undergraduate STEM education with workforce needs.
- Advances policies and funding to raise the bar for the training, mentoring, and professional development of graduate students and postdoctoral researchers.
- Establishes a pilot program to support partnerships that will expand research opportunities to students who attend minority serving institutions or other emerging research institutions.

- Encourages expanded data collection on the nature of the STEM workforce.
- Authorizes a 50% increase in funding over 5 years for key STEM education programs.

Increases research accessibility, accountability, and security. Federally funded research must be accessible and accountable to the American public. In addition, threats to research security have the potential to undermine the integrity of federally funded research projects. The bill addresses these challenges at multiple levels of accountability. Specifically, the bill:

- Requires assessment and research activities to improve the implementation of the Broader Impacts merit review criterion.
- Creates a new requirement for researchers to prepare a statement on possible security or other risks to society from their research in order to encourage researchers to always consider their research in a societal context.
- Expands access to data and other research products resulting from Foundation-funded projects through new data stewardship requirements and investments in open science tools and infrastructure.
- Codifies the Office of Research Security and Policy and the Chief of Research Security position to provide guidance and resources to researchers and funds the development of training, resources, and tools to help institutions and researchers understand and mitigate security risks.

Accelerates research to address major societal challenges. In carrying out its fundamental science and engineering mission over the past seven decades, the Foundation has delivered enormous benefits to society. It is time to build on that legacy and move the Foundation forward. To that end, the bill creates a new directorate, the Directorate for Science and Engineering Solutions (SES), that will enable the Foundation to take big risks and experiment with new approaches to accelerating progress in translating science and technology into solutions to society's major challenges. A critical consideration for the new SES directorate is its impact on the rest of the agency. The bill creates a structure, a funding profile, and feedback mechanisms to mitigate risks to the longstanding basic research mission of the Foundation and encourage collaboration across the agency. Specifically, the bill:

- Encourages an ecosystem of partnerships and collaborations in use-inspired and translational research, including intentional engagement of nontraditional players, e.g. policymakers and local communities.
- Provides flexible funding and hiring authorities.
- Places the SES Directorate within the Research and Related Activities Account, with an Assistant Director (AD) at the helm and an advisory committee with tailored expertise to advise the AD.
- Authorizes \$1 billion for the SES directorate in fiscal year 2022 with an average annual increase of 50% to \$5 billion in fiscal year 2026. This budget is in balance with the budget for the rest of the agency, reaching 27% of the total agency budget in its fifth year.