

January 16, 2019

President Donald J. Trump
The White House
1600 Pennsylvania Ave, NW
Washington, DC 20500

The Honorable Mitch McConnell
Majority Leader
United States Senate
U.S. Capitol Building, Room S-230
Washington, DC 20510

The Honorable Nancy Pelosi
Speaker of the House
United States House of Representatives
1236 Longworth House Office Building
Washington, DC 20515

The Honorable Chuck Schumer
Minority Leader
United States Senate
U.S. Capitol Building, Room S-224
Washington, DC 20510

The Honorable Kevin McCarthy
Minority Leader
United States House of Representatives
2468 Rayburn House Office Building
Washington, DC 20515

Dear President Trump, Majority Leader McConnell, Minority Leader Schumer, Speaker Pelosi, and Minority Leader McCarthy:

Reflecting the perspective of many in the scientific community, we write to express our grave concerns over the negative impacts of the partial federal government shutdown on our country's research enterprise.

The closure of federal agencies is impacting numerous science-based activities including space vehicle launches, monitoring of dangerous chemicals in the environment, inspection of food-processing facilities, control of invasive species, and more.

Consider the following research areas where halting scientific activity is impeding the health, security, and competitiveness of the nation:

Antibiotic resistance. Antibiotic resistance is one of the greatest public health challenges of our time. In the United States, more than 2 million individuals acquire an antibiotic-resistant infection every year, resulting in over 23,000 deaths. Researchers at the National Center for Agricultural Utilization Research have made the significant discovery that combining a very small dose of the chemical tunicamycin with a dose of penicillin can kill certain antibiotic-resistant microbes. This potentially life-saving work is now on pause as furloughed researchers are unable to conduct their studies.

Hurricane forecasting. Energy power plant operators, farmers, shippers, emergency workers, and many other members of our workforce rely on accurate storm path prediction. Unfortunately, men and women with technical expertise who refine the National Weather Service's Global Forecast System have been prevented from reporting to work, resulting in scheduled improvements not being made to our hurricane forecast modeling. This may hinder accurate forecasting of future hurricanes, potentially causing significant harm to major sectors of our economy, including, but not limited to, the energy grid, agriculture, and transportation.

Research infrastructure. Finally, in addition to impacts on the federal science workforce and its output, the shutdown is impacting scientists at non-federal research institutions across the country. For instance, the National Science Foundation (NSF), our flagship science-funding agency, is currently shuttered. NSF is responsible for roughly 25 percent of all federal support to academic institutions for cutting-edge research and has supported projects that have led to the development of Google, 3D printing, Global Positioning System (GPS), and Magnetic Resonance Imaging (MRI). NSF is now prohibited from authorizing funding for new projects, distributing grant payments, or even answering queries from the science community. At a time when aspects of our country's research infrastructure stand to be outcompeted by other nations such as China, we ought to be energizing our research community, not slowing it down.

We have outlined a few examples where the partial government shutdown is compromising the very research that is important to the health and security of our nation. Important scientific breakthroughs could be compromised or lost with each and every day that the shutdown continues.

We therefore urge you to open the federal government, send researchers back to work at their agencies, and allow science to flourish throughout the United States.

Sincerely,

Federation of American Scientists