

**Response to Dear Colleague Letter
NSF Intent to Restructure Critical Weather Infrastructure**

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First I would like to ask why you are proposing to dismantle NCAR. What is the problem that this is intended to solve? I am at a loss to understand why a successful and productive organization like NCAR should be destroyed. If you cannot explain this clearly, then all the other details you request are irrelevant.

In response to your question, “Are there any areas in which NCAR activities or capabilities duplicate those of other government agencies, universities, or the private sector?” the answer is “no.” NCAR is unique in its ability to support weather and climate research in the academic sector as well as provide national service. NCAR is vital for my research program at Rutgers University. My postdocs, students, and colleagues use the NCAR climate models, computers, and datasets to address future climate change and its impacts on humanity. We work with NCAR scientists to improve those models, which benefits us and the entire research community. I use NCAR teaching material to educate the students I teach. There is no substitute for the resources and research community that NCAR provides. Since 1979, my work has been supported by 18 NSF grants, and none of the work could have been accomplished without the resources provided by NCAR. I am sure that is the case for many, many other scientists in the U.S.

I would also like to point out some other consequences of changes to NCAR. NCAR serves our country most efficiently and effectively as a single entity and has proven its value repeatedly for decades. Breaking NCAR up will cost money and cause inefficiencies. If NCAR is dismantled, it will mean a loss of data, brain power, and institutional knowledge. NCAR benefits public safety, disaster preparedness, national security, human health, and more. For example, NCAR is crucial for national forecasting, offering services such as partnerships with airlines for in-air turbulence and icing advisories, working with reinsurance firms to evaluate wildfire, heatwave, and hurricane risks, and providing forecasting tools that help farmers, truckers, and other economic sectors cope with severe weather events.

Martinez (2026) clearly explained what we would lose by breaking up NCAR. The following parts of my response in quotation marks are from that paper. Air travelers would lose the protection provided by NCAR. It’s pioneering work on downbursts has halted accidents that they caused in the past. NCAR research helps airlines avoid turbulence. “Dismantling NCAR and moving this work elsewhere would break the integrated system that makes aviation safety research effective in the first place. NCAR uniquely brings together long-term observational data, advanced modeling, specialized instrumentation, and direct operational partnerships with agencies like the FAA under one roof. Fragmenting that capacity across multiple institutions would disrupt decades of trusted, public service relationships with the aviation community,

making it harder and slower to translate research into real-world protections for pilots and passengers. With millions of people in the sky every day, this is not a risk we should take.”

NCAR supports agriculture. “For example, NCAR scientists are working in conjunction with universities in Kansas and Nebraska and the U.S. Department of Agriculture to develop CropSmart, a next-generation system that aggregates weather forecasts, crop data, soil conditions, and other inputs into actionable, decision-ready information for farmers, agribusinesses, and agricultural officials. If NCAR is broken up, we lose this economic opportunity and the myriad ways it supports U.S. agriculture. NCAR’s long-standing collaborations, integrated modeling and computing capacity, and role as a trusted public service institution are what allow farmers to rely on consistent, decision-ready information year after year. All the agricultural tools housed, supported, or innovated by NCAR would be put at risk, leaving farmers with fewer early warnings, less reliable guidance, and greater exposure to weather extremes. These losses would translate to the food on our tables having a higher price tag, which inevitably increases food insecurity, already a significant problem in the United States.”

Dismantling NCAR is a national security threat. “Defense agencies rely on specialized, mission-critical environmental products and expertise that are developed, maintained, and refined through streamlined, long-standing relationships with NCAR scientists. These capabilities cannot be replaced quickly without disruption, and even short gaps in trusted weather and environmental intelligence would increase operational risk for current and future missions. Protecting NCAR is an investment in military readiness, operational efficiency, and the safety of those who serve.

“Americans in disaster-prone areas will have less time to prepare for, and evacuate from, extreme weather. For decades, NCAR scientists have worked to develop and refine instruments and methods to collect real-time hurricane observations and improve our understanding of storm behavior. By the 1980s, data and modeling advances emerging from NCAR research were being used operationally by NOAA, contributing to a roughly 20%–30% improvement in the accuracy of hurricane track forecasts compared to earlier decades. NCAR continues to enhance forecasting capabilities for hurricanes, as well as their associated flood risks, through the center’s sophisticated flood risk model. Today, the model is used operationally by the National Weather Service in more than 3,800 locations serving 3 million people.

“If NCAR’s role in advancing forecast science is weakened by dismantling it, these gains in disaster preparedness will be put in jeopardy. Forecast improvements do not happen automatically; they require sustained research, coordination, and testing. If NCAR’s research capabilities to develop and improve weather forecasting disappear, the United States will face a major public safety risk.”

Americans would also lose a unique source of national pride. I have been a Member Representative to UCAR, the organization that operates NCAR, for 25 years and have served on its Board of Trustees and many committees. Scientists the world over respect NCAR, come to work with its scientists and models, and depend on its models and datasets for their research. They respect the U.S., because it has produced NCAR, and made its products freely available

worldwide. Many weather services around the world use the NCAR-produced WRF model to produce local weather forecasts, and take for granted that the U.S. is providing this service.

“For more than 6 decades, NCAR has shown that open, collaborative science can save lives, support economic resilience and national defense, and expand opportunity across generations. Preserving and celebrating NCAR are choosing a future where shared knowledge, innovation, and public-serving science continue to thrive.”

Closing NCAR is a needless act that could endanger American lives. I implore you to take all possible measures to ensure our community’s safety and to prevent the dissolution of NCAR.

Marinez, Carlos, 2026: What Americans lose if their National Center for Atmospheric Research is dismantled, *Eos*, 107, <https://doi.org/10.1029/2026EO260041>. Published on 27 January 2026.