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AMS Feedback to NSF NCAR Dear Colleague Letter

12 March, 2026, AMS submitted its official response to the NSF 26-203 Dear Colleague Letter *NSF Intent to Restructure Critical Weather Infrastructure* | NSF - U.S. National Science Foundation

Executive Summary:

The breakup of the National Center for Atmospheric Research (NCAR) will harm meteorological research and innovation in the United States with severe consequences to current and future efforts of the weather enterprise to protect life, property, and the nation's economy. NCAR is a centerpiece of innovation for the U.S. atmospheric sciences community. A proposed breakup without carefully weighing the pros and cons of options slows progress in the field, thus undermining U.S. leadership in understanding the Earth system and its impact in the long run. Rather than dismantling NCAR, AMS recommends that the NSF engage in a rigorous, open, and systematic process to develop a strategy and plan to enhance relevant scientific innovation in the weather, water, and climate enterprise.

Stand Up for NOAA Research – The Time to Act is Now

Science Helps You Thrive: Strong U.S. Scientific Leadership Raises Us All

The U.S. Weather Enterprise: A National Treasure at Risk

AMS Best Practice Statement on Preparing Students for Employment in the Private Sector

Urban Climate and Necessity for Adaptation in Cities

The Future of Ecological Forecasting

Bachelor's Degree in Atmospheric Science

Special Statement on Harassment and Intimidation of Broadcast Meteorologists

The American Meteorological Society Champions Equity, Inclusion, and Justice

Best Practices for Publicly Sharing Weather Information Via Social Media

Best Practices for the Severe Weather Safety for Pre-K through Grade 12 Children at School

The Supreme Court Decision in West Virginia v. EPA: A Setback in a Time of Tremendous Opportunity

This should include a central role for NCAR to continue serving the nation's needs for the weather enterprise under the broader Earth System Science and its applications.

Importance of NCAR to U.S. Science, Innovation, and Workforce Development

For decades, NCAR has advanced knowledge and understanding that saves lives, improves livelihoods, supports our national security, and strengthens the nation's economy. NCAR has enhanced observing systems, advanced research, improved forecasts, provided products that are widely used by research and application communities, promoted collaboration, and trained new generations of scientists and professionals. NCAR's record of success is impressive, crucial to the national interest, and unmatched by any other entity in the world. For illustration, NCAR developed and tested the Weather Research and Forecasting (WRF) Model that has served as the backbone for weather forecasting in the government and industry for years, and also the Model for Prediction Across Scales (MPAS) that was recently adopted by NOAA to enable even better forecasts in the future.

As an NSF-sponsored federally funded research and development center (FFRDC) that advances scientific breakthroughs and development of tools for the research community, NCAR is the premier entity that brings together government, academia, and private and nonprofit sectors to create and enhance environmental (especially atmospheric) knowledge and products. The U.S. private sector has built highly accurate forecast guidance systems and leads the world in applying artificial intelligence/machine learning (AI/ML) to weather and extended prediction, relying on capabilities at NCAR.

In addition to its leading research programs, NCAR has developed internships, educational materials, and other programs to train the next generation scientists, forecasters, and others required for world-class national meteorological prediction. NCAR, with its interaction-enabling infrastructure, plays a crucial role in the U.S. (and global) atmospheric science enterprise by convening workshops, classes, and conferences that provide opportunities to share knowledge and ideas. NCAR has long demonstrated the value of the expertise of its permanent and visiting staff in so many areas of

Freedom of Scientific Expression

Climate Intervention

Weather Analysis and Forecasting

Extreme Cold Temperature Outbreaks: A Call to Action for Better Preparation

Software Preservation, Stewardship, and Reuse

Anti-Racism and Support of the Asian American and Pacific Islander (AAPI) Community

Tropical Cyclone Forecasting in the United States

Expectations Concerning Media Performance During Severe Weather Emergencies

Best Practices for Large Retail Outlets in Preparation for Severe Wind and Tornado Emergencies

Priorities for a New Decade: Weather, Water, and Climate

Hurricane Preparedness During the COVID-19 Pandemic

Special Statement on Racism and Inequity

Tornado Sheltering Guidelines during the COVID-19 Pandemic

atmospheric and related sciences (hydrology, oceanography, atmospheric chemistry, heliophysics/space weather, etc.), developing focused and interdisciplinary tools for widespread use that both leverage the contributions of the broader community and serve as the backbone for education, application, and integration into larger-scale models, including those that support operational forecasting.

NCAR is the intellectual center of the American atmospheric sciences community, and its loss would undermine U.S. leadership in this important scientific domain. It is inconceivable that the United States could enhance its ability to provide the needed environmental information and forecasts without an entity such as a well-integrated NCAR. Any restructuring of NCAR on the part of NSF needs to consider adverse effects on the interconnection/partnership between NCAR and the government, academic, and private sectors it works with.

Vision for the Future Role of NCAR in the U.S. Weather Enterprise

A truly nationally implemented effort that synergistically integrates the efforts of governments (federal, state, local, and tribal), academia, and the private and nonprofit sectors will enable America to have access to the best possible weather and extended-range predictions. To achieve global leadership, it will be necessary to have not just excellence in individual components but also coordinated cross-sector cooperation across private/government/academic and nongovernmental organizations (NGO). Similarly, the scientific effort will need to integrate across traditionally separate scientific disciplines such as meteorology, oceanography, hydrology, atmospheric chemistry, and space physics. In this regard, NCAR already serves a crucial role, and yet there is potential for it to play an even larger role in future.

As NSF addresses the future of critical weather science infrastructure, it should preserve what is working well along with enhancing efforts to strengthen the weather enterprise. Any restructuring of the weather research infrastructure needs to be done so that future work is sustained and strengthened through partnership between NCAR and relevant weather operational and research centers. As part of this evolution, NSF and other federal agencies should focus on leveraging more effectively their abilities, expertise, and resources in a

The Energy Sector and Earth Observations, Sciences, and Services

Climate Change

Full, Open, and Timely Access to Data

Lightning Safety

On the Infrastructure Supporting Weather, Water, Environmental, and Climate Sciences, Services, and Assessments

Weather Safety at Venues and Public Gatherings

Best Practices for the Dissemination of Weather Warnings to the Public

way that allows NCAR to participate fully in laying the groundwork for the United States to accelerate progress in all areas of the collective enterprise. It will be important to take an open and transparent "whole of society" viewpoint to these considerations to ensure decisions made will not only capture possible synergies across agencies, institutions, and sectors, but also assure the American public that any decisions about NCAR's evolution incorporate relevant areas of expertise as well as broad community input.

AMS recommends that NSF engage in a careful review of NCAR, soliciting comprehensive input from key partners and stakeholders. Following a transparent and deliberative process would ensure success in achieving an NCAR that meets the emerging needs of the nation.

The American Meteorological Society (AMS) is Ready to Assist

AMS serves scientists, professionals, and the public with respect to weather, water, and climate. Our members include research scientists, service providers, practitioners, public communicators, educators, and students in the United States and throughout the world. AMS's core is a public–private partnership that promotes collaboration among private sector companies, academic institutions, government agencies, and NGOs. The AMS community is ready to assist NSF in developing a strategy and implementation plan for enhancing the nation's capacity for science and innovation in the weather, water, and climate enterprise. We welcome the opportunity to help develop and support a robust vision for the future of NCAR.

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