February 9, 2026

Brian Stone
Acting Director and Chief of Staff
National Science Foundation
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Re: Shutdown of the National Center for Atmospheric Research (NCAR)

Dear Acting Director Stone,

On behalf of the American Academy of Actuaries (Academy),[1] we appreciate the opportunity to comment on the announced plan to dismantle the National Center for Atmospheric Research (NCAR). Public reporting indicates the National Science Foundation will break up NCAR and relocate "vital activities," a course of action that—if implemented—would remove a cornerstone of the nation's open, scientific infrastructure for tracking and understanding weather and climate risk.

NCAR's continuity is not only a scientific necessity, but an economic one. NCAR's shutdown would eliminate rigorously curated, public, and scientifically grounded resources that the American insurance industry relies on to understand systemic climate risk and safeguard consumers. Actuaries utilize NCAR's datasets and community climate modeling frameworks to benchmark and validate catastrophe model outputs, support pricing, reserving, and capital adequacy analyses that underpin the financial soundness of insurance markets. These resources are also relied upon internationally by insurers, reinsurers, and catastrophe model developers to analyze extreme climate-driven risk scenarios across regions and inform cross border capital allocation decisions. Given the global interconnectedness of insurance and reinsurance markets, disruption to NCAR's infrastructure would propagate well beyond U.S. borders. We urge actions to maintain the continuity of NCAR's datasets, models, and guidance so the insurance ecosystem can continue to price and capitalize responsibly, which is necessary for a healthy insurance marketplace.

NCAR has long supplied the foundational capabilities that enable catastrophe modeling and climate-informed pricing and reserving in the property and casualty insurance sector. Any disruption to its operations would materially degrade these capabilities, heighten uncertainty in risk assessments, and undermine the stability and affordability of insurance coverage for U.S. consumers. Without the critical

[1] The American Academy of Actuaries is a 20,000-member professional association whose mission is to serve the public and the U.S. actuarial profession. For 60 years, the Academy has assisted public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

information NCAR provides, insurers would be significantly challenged when accurately pricing and offering coverage, leading to significant affordability and availability challenges nationwide.

Actuaries apply professional judgment, based on available and well-tested data and models, to evaluate low-frequency, high-severity events as well as long-term trends that affect insurance markets and consumers. NCAR's work supports the actuarial profession's ability to assess and manage financial risk by offering credible, consistent, and well-documented information. NCAR's publicly available datasets, community climate models, and scientific guidance have historically provided a common, transparent foundation for these analyses across insurers, regulators, and other stakeholders. The following considerations describe why disruption or loss of NCAR's resources would introduce additional challenges for financial risk analysis and decision-making.

Catastrophe Modeling
Developing accurate models and assumptions for insurance and financial security requires that actuaries use reliable and relevant data. NCAR's datasets, covering atmospheric dynamics, climate variability, and extreme event frequency, are particularly foundational to the catastrophe models used in property and casualty insurance. Without these resources, the insurance industry faces increased uncertainty and greater challenges in accurately assessing and pricing risk.

Trend Analysis and Long-Term Assumptions
Actuaries incorporate historical and projected climate trends into pricing and reserving assumptions for insurance contracts and capital adequacy assessments. NCAR's research enables actuaries to evaluate changes in hurricane intensity, wildfire spread, and precipitation patterns, factors that materially affect loss costs and risk margins. Discontinuation of NCAR's work compromises the ability to set assumptions that accurately reflect emerging risks.

Correlation and Systemic Risk Assessment
Climate-related risks often occur together across regions and insurance lines, amplifying the potential for widespread losses. NCAR's integrated climate models help insurers anticipate these interconnected risks and extreme scenarios, enabling stronger financial resilience and more stable coverage for consumers. Without these tools, the industry risks underestimating total exposure, which could lead to inadequate capital reserves and higher volatility in pricing and insurance availability.

Public Access and Market Stability
NCAR's open data framework promotes transparency and consistency across insurers, regulators, and policymakers, reducing information asymmetry and supporting fair pricing for consumers. Without NCAR, reliance on proprietary or fragmented data sources may increase volatility in insurance markets and reduce confidence in actuarial projections. With less availability of data and uncertainties about risk exposure, fewer companies may choose to enter or remain in markets, leading to availability challenges for consumers.

NCAR and Non-Governmental Innovation
NCAR has been an active participant in the creation of Industry-University Cooperative Research Centers sponsored by the National Oceanic and Atmospheric Administration and the National Science Foundation. These centers bring together academic researchers and industry data users to develop innovative products, enabling the insurance and re-insurance industry to better assess climate-related risks. Without NCAR, the centers will experience data gaps and diminished modeling capacity and expertise. This would likely result in fewer innovations and less useful tools for assessing climate-related risk.

In addition to these concerns, it is important to underscore the fundamental economic relationship between uncertainty, price, and availability in insurance markets. In all financial arrangements, uncertainty carries a positive cost. Just as equities command higher expected returns than bonds, greater uncertainty in forecasting insurance losses increases the risk load or margin required for insurers to offer coverage. When the scientific foundation for understanding natural hazard risk is weakened, insurers must assume wider loss distributions and higher tail risk, which translates directly into higher premiums for consumers. Beyond price, the availability of insurance depends on insurers' confidence in their ability to understand and manage risk.

As uncertainty grows, some insurers will reduce exposure or withdraw from high-risk areas altogether. Eliminating or degrading key sources of climate and weather information also makes it harder for communities, developers, and policymakers to determine the appropriate level of resilient construction and land use planning, investments that are essential to ensuring long-term availability and affordability of insurance coverage.

We strongly encourage the NSF reconsider its plan to dismantle the NCAR, as doing so is very likely to negatively impact the industry, insurance coverages, and outcomes for the American public.

If you have any questions or would like to discuss these comments further, please contact Will Behnke, the Academy's policy project manager, risk management and financial reporting (behnke@actuary.org).

Sincerely,
Bill Jones, MAAA, FCAS
Vice President, Risk Management and Financial Reporting Practice Council
American Academy of Actuaries

Susan Kent, MAAA, FCAS
Vice President, Casualty Practice Council
American Academy of Actuaries

Peter Ott, MAAA, FCAS
Chairperson, Research Committee
American Academy of Actuaries