

ICAMS

Interagency Council for Advancing Meteorological Services

Progress in Federal Coordination to Advance Meteorological Science and Services

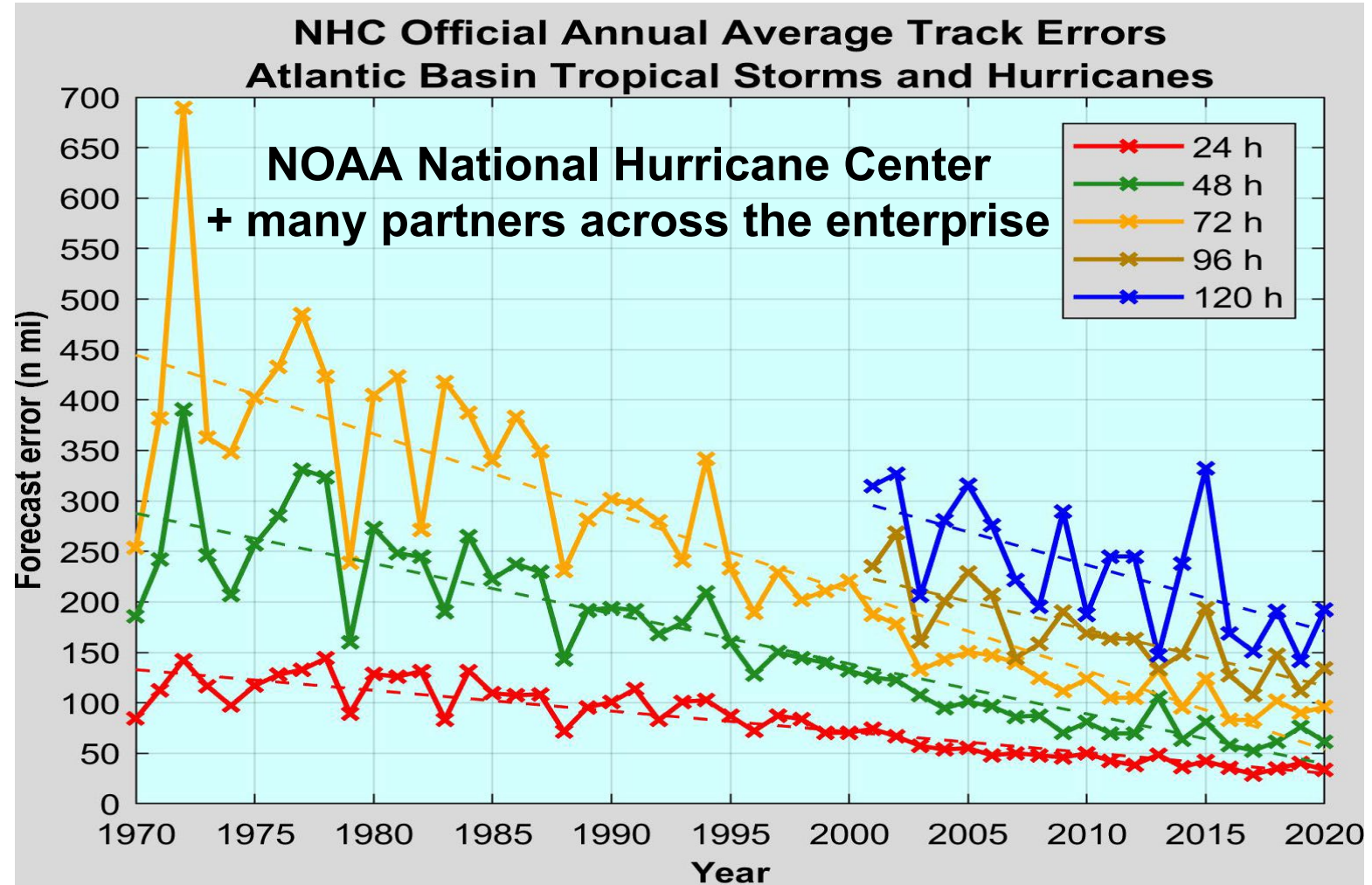
Dr. Scott Weaver

*Executive Director, Interagency Council for Advancing Meteorological Services
White House Office of Science and Technology Policy*

NMME Workshop – June 21, 2023

ICAMS Aspirational Goal: The United States will lead the world in meteorological services via an earth system approach, providing societal benefits with information spanning local weather to global climate

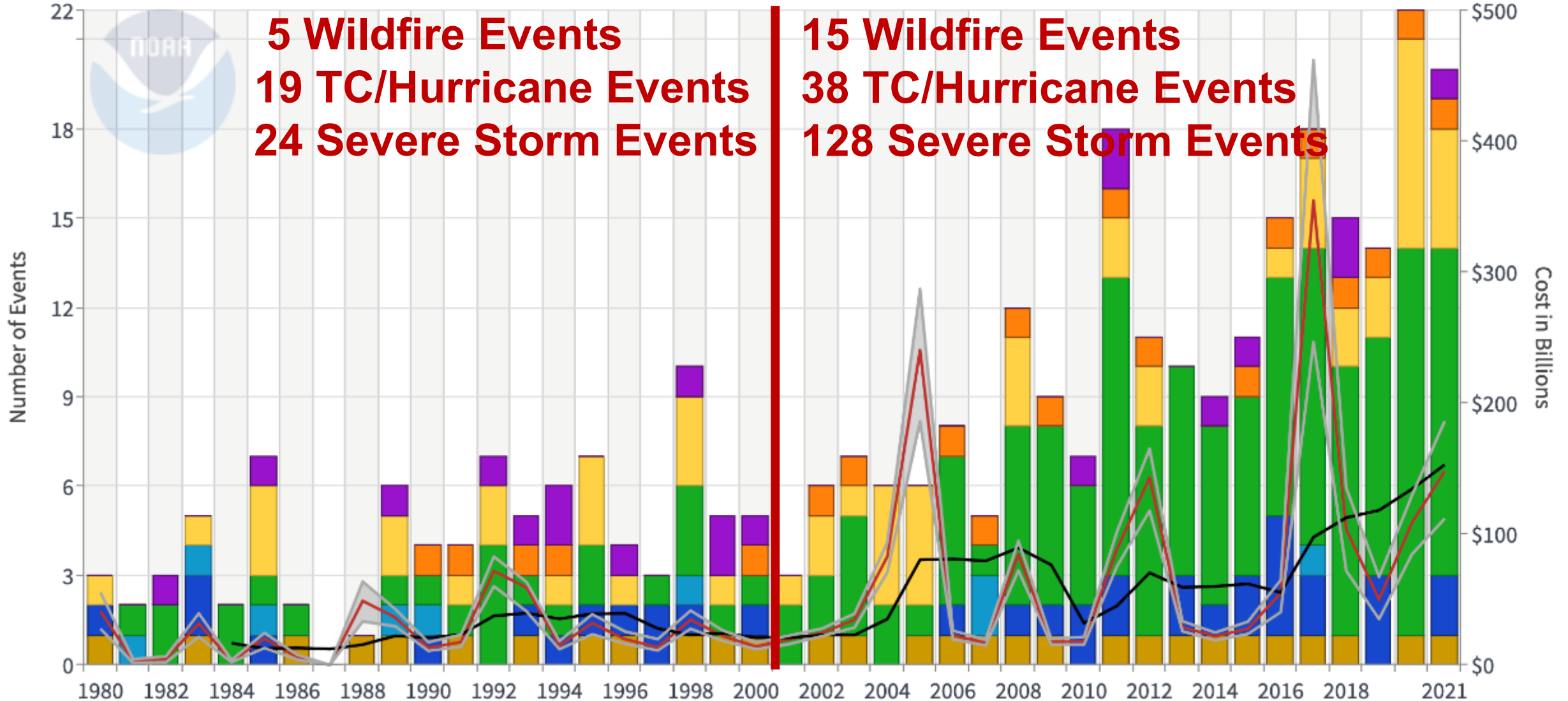
How are we doing?



Meteorological Disaster Impacts are Increasing

United States Billion-Dollar Disaster Events 1980-2021 (CPI-Adjusted)

- Drought Count
- Wildfire Count
- Flooding Count
- Winter Storm Count
- Freeze Count
- Combined Disaster Cost
- Severe Storm Count
- Costs 95% CI
- Tropical Cyclone Count
- 5-Year Avg Costs



POLICY DRIVERS FOR ICAMS

Public Law 115-25: Weather Research and Forecasting Innovation Act (2017)

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SEC. 402. INTERAGENCY WEATHER RESEARCH AND FORECAST INNOVATION COORDINATION. (a) **ESTABLISHMENT.**—The Director of the Office of Science and Technology Policy shall establish an Interagency Committee for Advancing Weather Services to improve coordination of relevant weather research and forecast innovation activities across the Federal Government. The Interagency Committee shall—

- (1) include participation by the National Aeronautics and Space Administration, the Federal Aviation Administration, National Oceanic and Atmospheric Administration and its constituent elements, the National Science Foundation, and such other agencies involved in weather forecasting research as the President determines are appropriate;
- (2) identify and prioritize top forecast needs and coordinate those needs against budget requests and program initiatives across participating offices and agencies; and
- (3) share information regarding operational needs and forecasting improvements across relevant agencies.

(b) **CO-CHAIR.**—The Federal Coordinator for Meteorology shall serve as a co-chair of this panel.

(c) **FURTHER COORDINATION.**—The Director of the Office of Science and Technology Policy shall take such other steps as are necessary to coordinate the activities of the Federal Government President. Determination. with those of the United States weather industry, State governments, emergency managers, and academic researchers.

CHARTER

of the

INTERAGENCY COUNCIL FOR ADVANCING METEOROLOGICAL SERVICES (ICAMS)

1. OFFICIAL DESIGNATION

The Interagency Council for Advancing Meteorological Services (ICAMS) is chartered under authority of the Director of the Office of Science and Technology Policy (OSTP) to serve as the Interagency Committee for Advancing Weather Services pursuant to Public Law No. 115-25, title IV, sec. 402 (Apr. 18, 2017), 15 U.S.C. § 8542.

As a continuation of the mandate in Public Law No. 87-843, title III, sec. 304 (Oct. 18, 1962), 68 Stat. 1114, and consistent with Public Law No. 115-25, ICAMS leads the annual development of an interagency budget review of programs supporting meteorological services and supporting research and annual implementation plans.¹

2. PURPOSE AND SCOPE

ICAMS is the formal mechanism by which all relevant Federal departments and agencies (Ds/As) coordinate implementation of policy and practices to ensure U.S. global leadership in the meteorological services² enterprise. ICAMS also informs the development of relevant Federal policies via the National Science and Technology Council (NSTC) and within individual Ds/As.

ICAMS AGENCIES and DEPARTMENTS

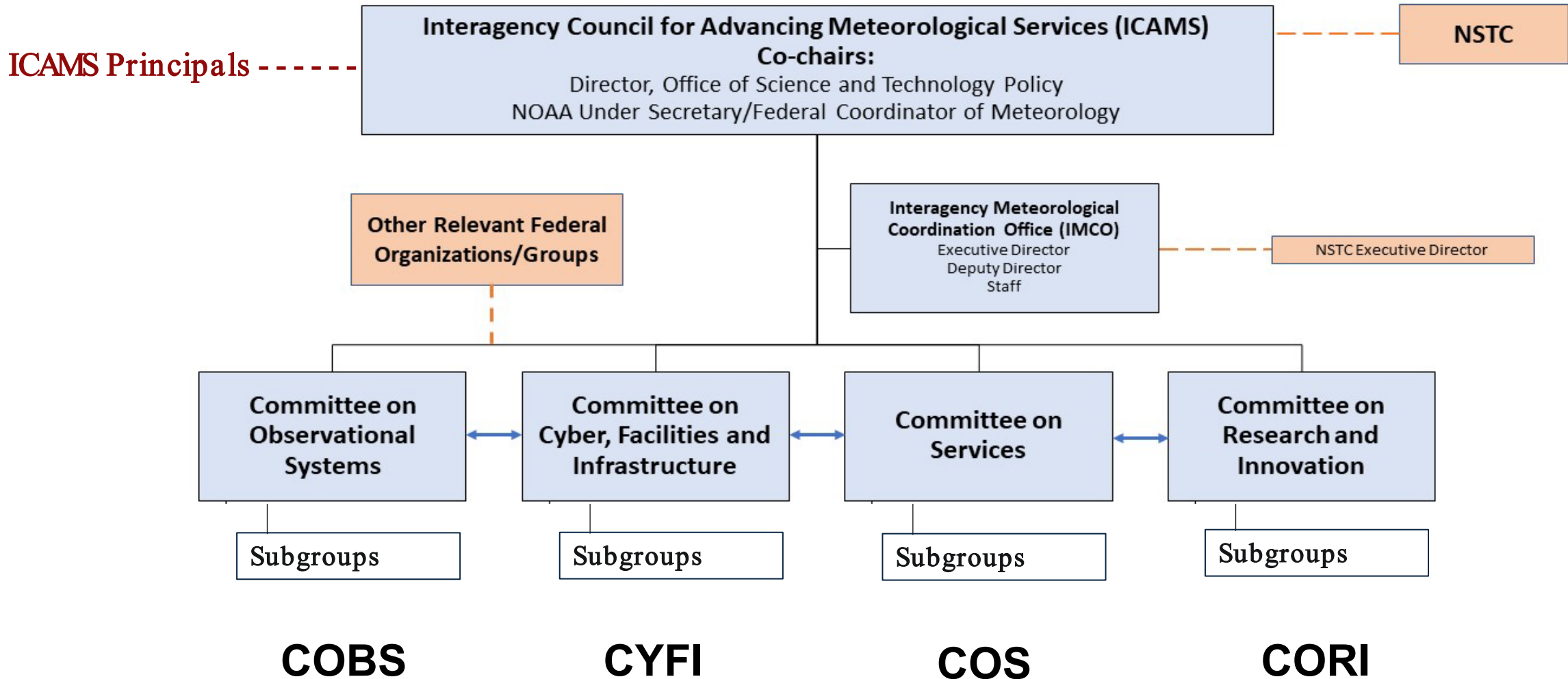
Fostering coordination across the broad set of relevant agencies and departments.



- **Executive Office of the President (EOP)**
 - Office of Science and Technology Policy (OSTP)
 - Office of Management and Budget (OMB)
- **Department of Agriculture (USDA)**
 - Office of the Chief Scientist (OCS)
- **Department of Commerce (DOC)**
 - National Institute of Standards and Technology (NIST)
 - National Oceanic and Atmospheric Administration (NOAA)
 - NOAA National Weather Service (NWS)
 - NOAA National Environmental Satellite, Data, and Information Service (NESDIS)
 - NOAA National Ocean Service (NOS)
 - NOAA Office of Oceanic and Atmospheric Research (OAR)
- **Department of Defense (DOD)**
 - United States Army (USA)
 - United States Air Force (USAF)
 - United States Marine Corps (USMC)
 - United States Navy (USN)
 - United States Space Force (USSF)
- **Department of Energy (DOE)**
- **Department of Health and Human Services (HHS)**
 - National Institutes of Health (NIH)
 - Centers for Disease Control and Prevention (CDC)
- **Department of Homeland Security (DHS)**
 - Federal Emergency Management (FEMA)
 - United States Coast Guard (USCG)
- **Department of the Interior (DOI)**
 - United States Geological Survey (USGS)
 - Bureau of Land Management (BLM)
 - National Park Service (NPS)
 - Bureau of Ocean Energy Management (BOEM)
 - U.S. Fish and Wildlife Service (FWS)
- **Department of State (DOS)**
 - Bureau of Oceans and International Environmental and Scientific Affairs (OES)
- **Department of Transportation (DOT)**
 - Federal Aviation Administration (FAA)
 - Federal Highway Administration (FHWA)
- **Environmental Protection Agency (EPA)**
- **National Aeronautics and Space Administration (NASA)**
- **Nuclear Regulatory Commission (NRC)**
- **National Science Foundation (NSF)**
- **National Transportation Safety Board (NTSB)**

The new ICAMS coordination structure aims to simplify and improve coordination

ICAMS Structure



Interagency Council for Advancing Meteorological Services (ICAMS)

Interagency Meteorological Coordination Office (IMCO)

Committee on
Observational
Systems

WG Tropical
WG Winter
WG NGD

Subcommittees

Space-based Obs.

Airborne Obs.

Surface and Subsurface
Obs.

Committee on Cyber,
Facilities, and
Infrastructure

Subcommittees

High Performance and Cloud
Computing for Earth System
Applications

Earth System Data
Infrastructure and Stewardship

Operational Processing Centers

Committee on
Services

WG Social Equity

Subcommittees

Weather

Water

Climate

Atmospheric Composition

Committee on
Research and
Innovation

Subcommittees

Earth System Modeling &
Prediction

Data Assimilation and
Observation Strategy

Application of Weather and
Climate Prediction to Decision
Making

Earth Systems ML/AI and
Advanced Technologies

Joint Action Groups (JAGs)

Integrated Obs. of Met. Extremes and Regional Information | Earth System Predictability | Space Weather Obs., Services and Research

WHY ICAMS MATTERS

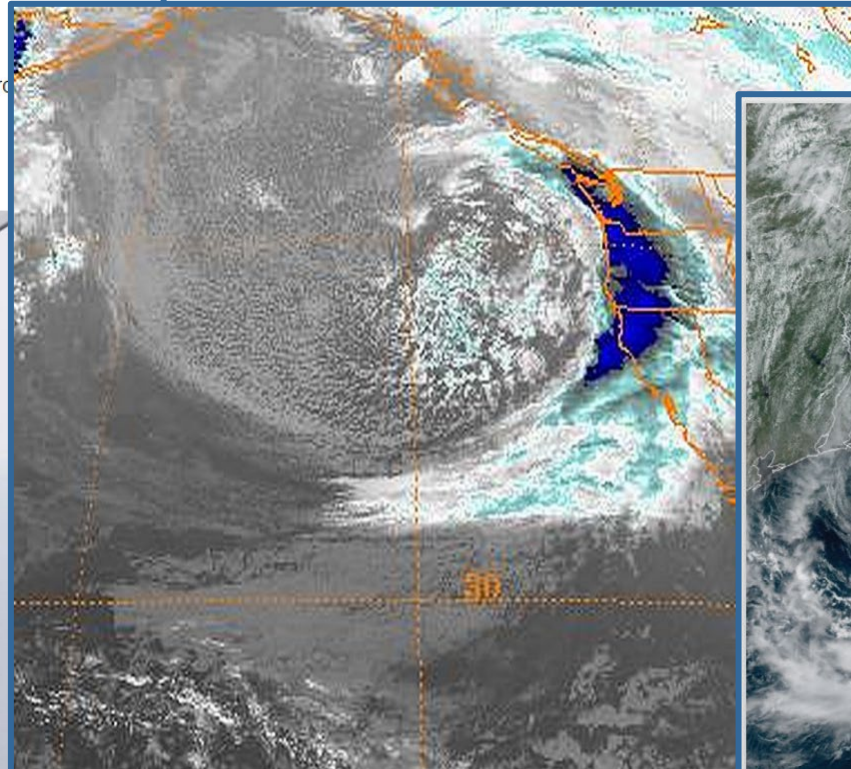
- Represents the first major restructuring of the Federal meteorological enterprise since the 1960s, undertaken to meet current national needs within the congressional mandate (*e.g., extreme event impacts, technology changes*)
- Elevates meteorological coordination to the White House level; works in concert with relevant National Science and Technology Council (NSTC) bodies. (*e.g., ICAMS – USGCRP coordination*)
- Aims to fill gaps and streamline interagency coordination while adopting a comprehensive Earth-system approach to break down barriers between disciplines, and better connect science with services and policymaking (*e.g., R2X2R*)

RECENT ACCOMPLISHMENTS – EXTREME Wx RECON

Hurricane Hunters are flying into West Coast storms earlier than ever

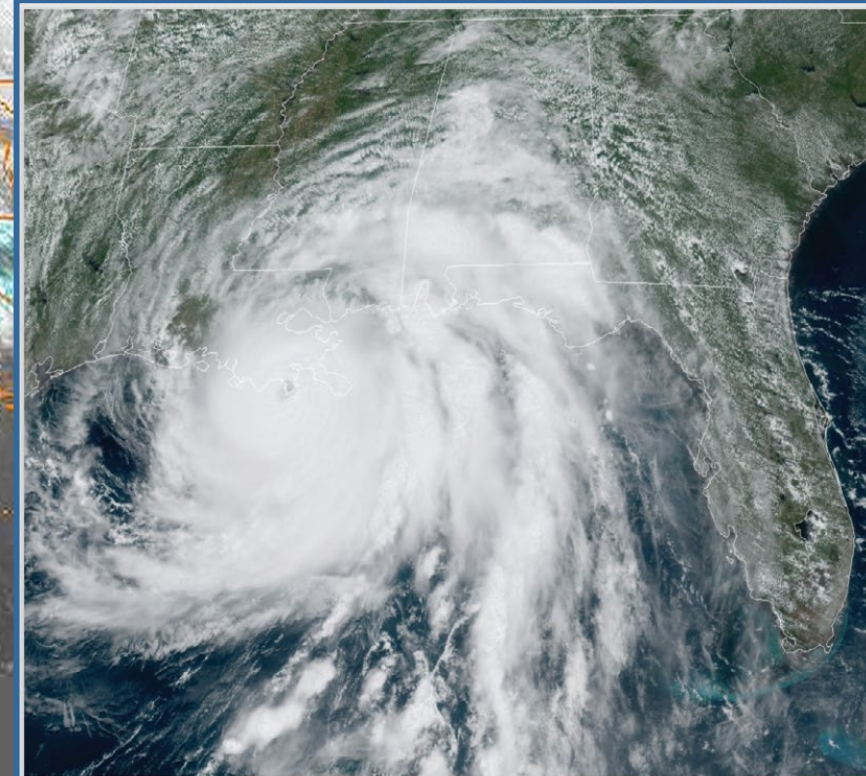
Aircraft are flying into atmospheric rivers earlier than in past years to collect vital data for improved forecasting.

By Mike Branom
December 9, 2022 at 3:17 p.m. EST



National Winter Season Operations Plan

FCM-P13-2022
Washington, DC
February 2022



National Hurricane Operations Plan

FCM-P12-2022
Washington, DC
May 2022

Hurricanes & Atmospheric Rivers

RECENT ACCOMPLISHMENTS – WILDLAND FIRE

- ICAMS Committee on Observational Systems collaborated with USGEO on interagency science recommendations to inform FY24 agency budget planning
- ICAMS Committee on Research and Innovation held a series of interagency wildland fire workshops throughout 2022 to identify R&D gaps. S2S was the focus of the October Workshop.
- BAMS papers in preparation to provide S&T recommendations relevant to the meteorological services enterprise



OPPORTUNITIES FOR S2S – CLIMATE SERVICES FTAC

“Increasing the ambition and effectiveness of the Nation’s climate services necessitates integrating existing capabilities in climate and meteorological sciences into a coherent, whole-of-government framework”

*A Federal Framework and Action Plan
for Climate Services*

PRODUCT OF THE
FAST TRACK ACTION COMMITTEE ON CLIMATE SERVICES
OF THE NATIONAL SCIENCE AND TECHNOLOGY COUNCIL



March 2023

OPPORTUNITIES FOR S2S – DECADAL STRATEGIC PLAN

- Weather Research and Forecasting Innovation Act (2017) requires ICAMS to identify and prioritize top forecast needs
- ICAMS Charter directs ICAMS to “**lead the development of a decadal strategic plan** to advance meteorological services with involvement of earth system science, service, and stakeholder communities”
- OSTP has secured a partnership with STPI for support and has launched the development of the ICAMS decadal strategic plan
- Public listening sessions on March 14 and April 4. Interviews with primary federal ICAMS stakeholders and federal roundtable on April 17

ICAMS

Interagency Council for Advancing Meteorological Services

Thank You for Listening