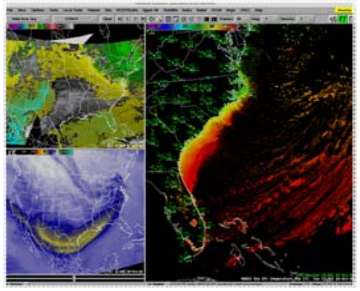
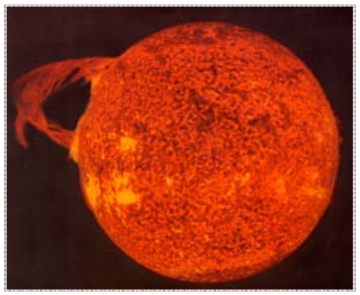
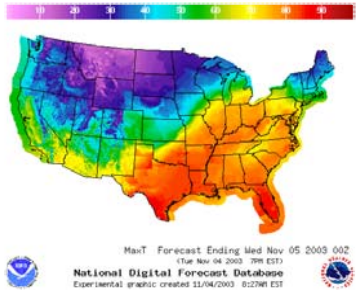
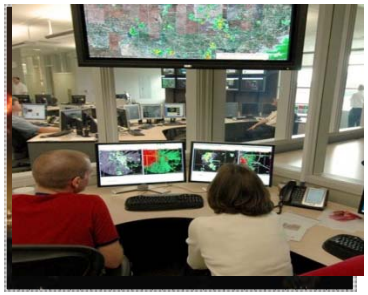
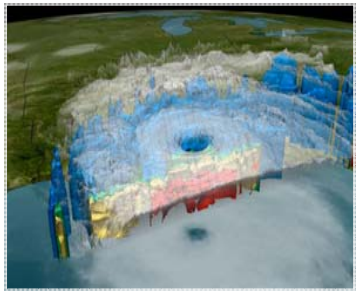
NOAA
National Weather Service
Building a Weather-Ready Nation







DATE

NWS Vision/Mission

Build a Weather-Ready Nation where Society is prepared for and responds to Weather-Dependent Events

Provide weather, water, and climate data, forecasts and warnings for the protection of life and property and the enhancement of the national economy.

An "Average" Year and Trends in the U.S.
Impacts on Society

6 Atlantic Hurricanes

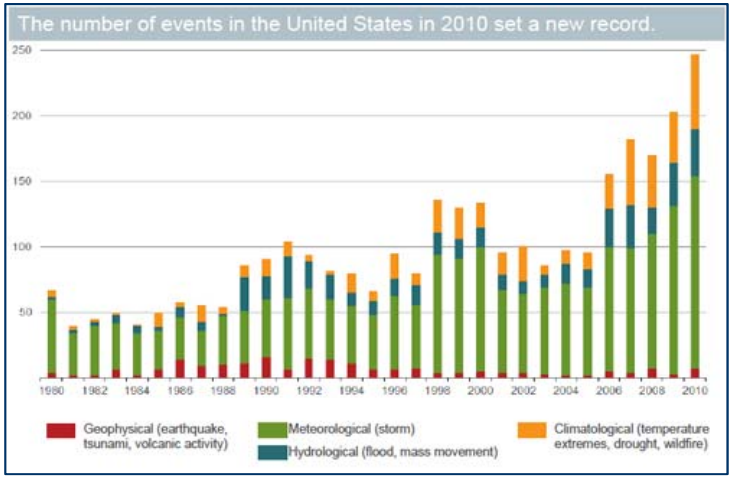
1,300 Tornadoes

5,000 Floods

26,000 Severe Thunderstorms

Drought and Large Wildfires

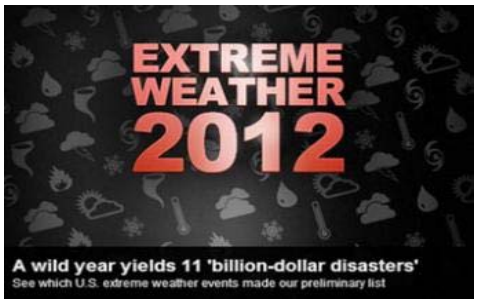
650 Deaths
$15B in Losses

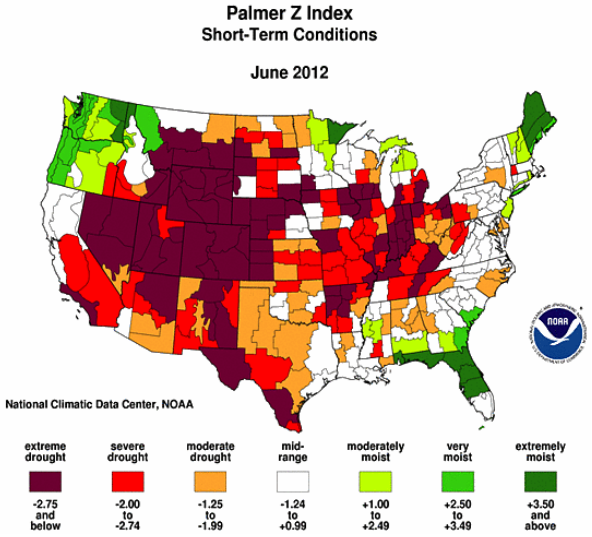


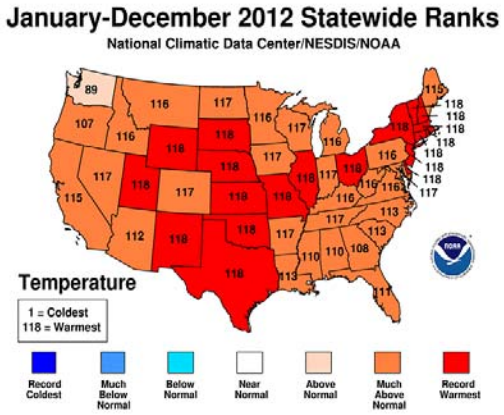
Regardless of the cause, the trend shows an increasing numbers of extreme weather events, at increasing cost to the nation

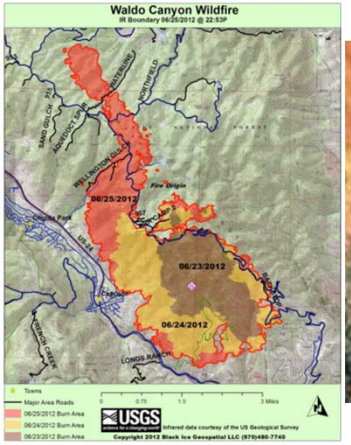
What will 2012 be known for?

Hurricane Sandy, Wildfires, Drought, and Heat

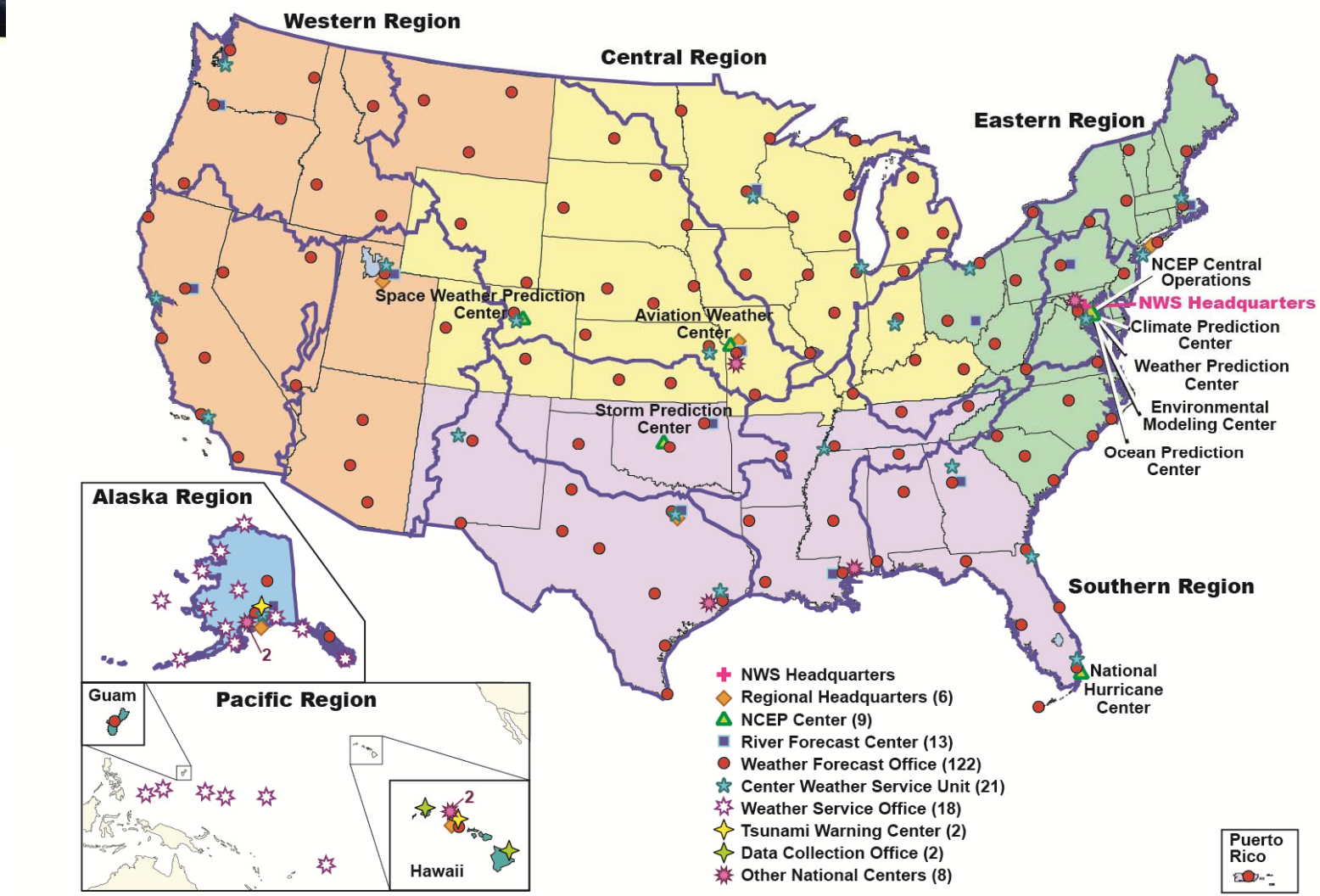






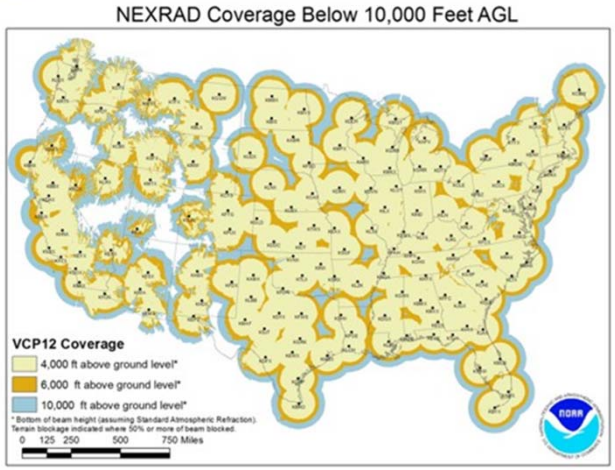


NWS Operations
Community Based Services

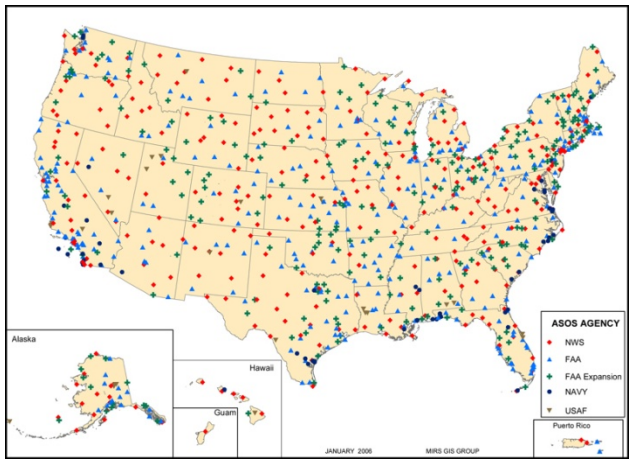


NWS Across the Nation

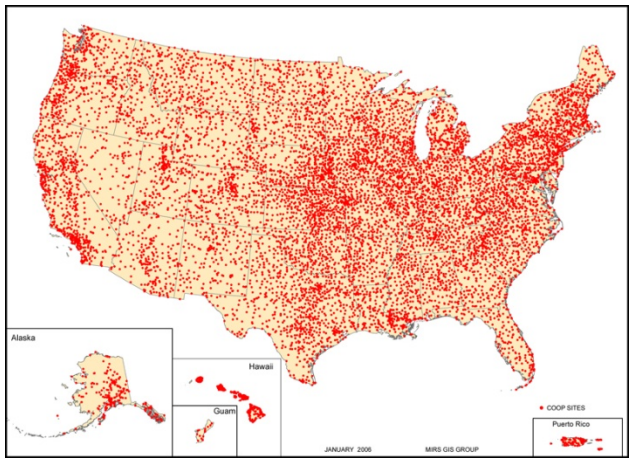
Doppler Radars



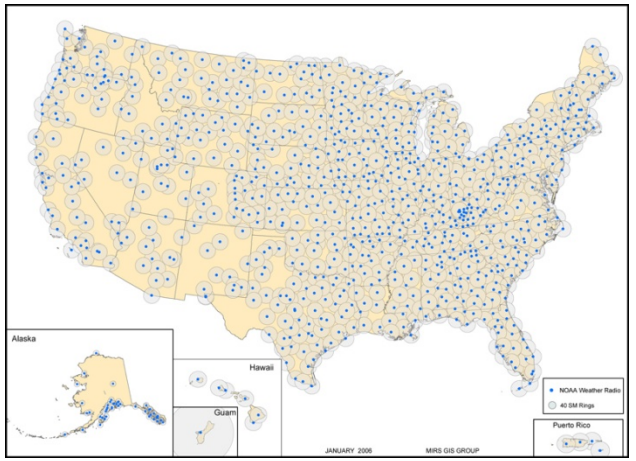
Automated Surface Observing Sites



Cooperative Observer Sites

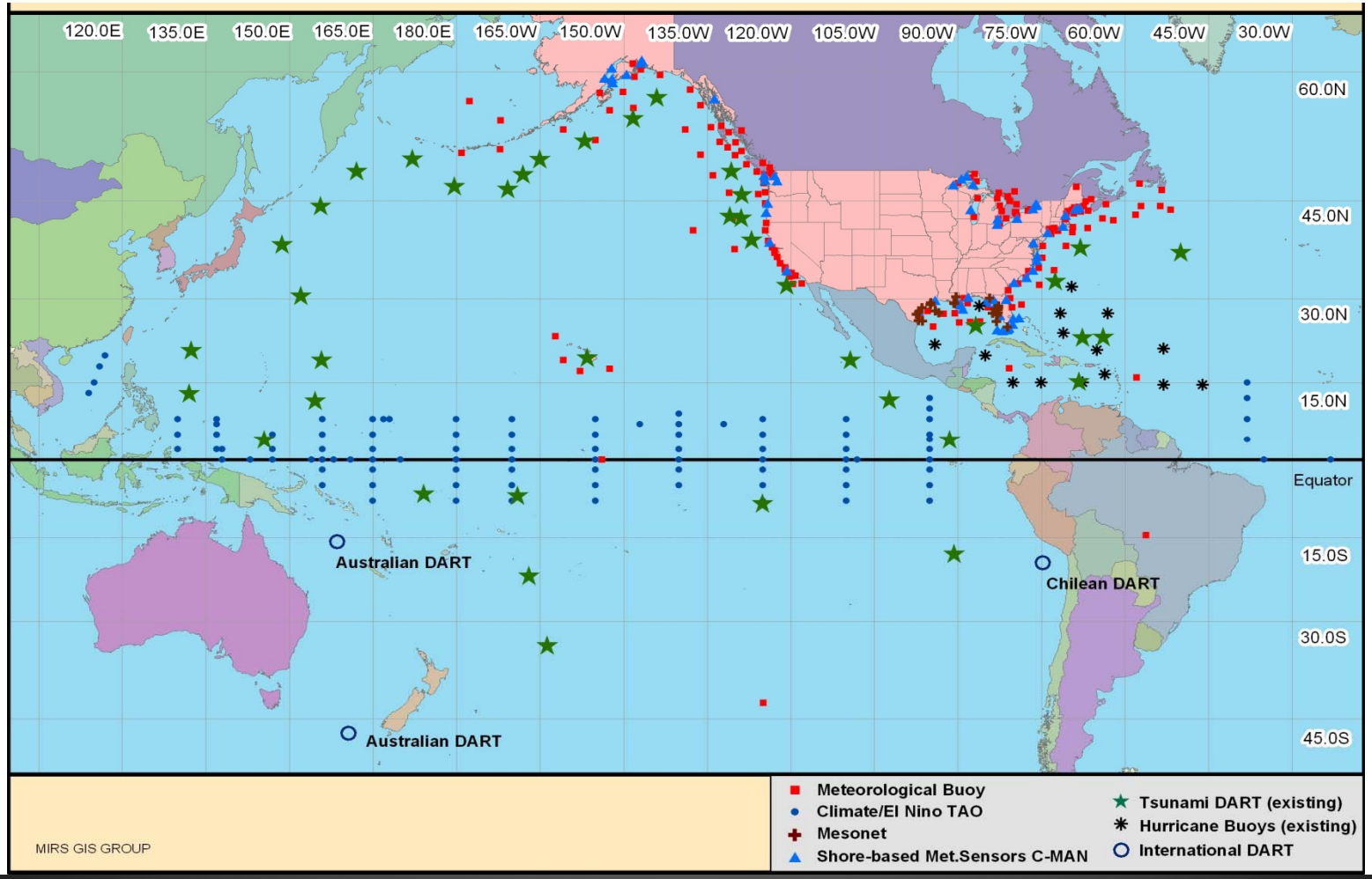


NOAA Weather Radio Transmitters



Observations

Buoy Networks



National Weather Service Overview

The average person only sees the tip of the iceberg

TV
INTERNET
CELL PHONE RADIO NWR
PRIVATE WEATHER COMPANIES

NATIONAL CENTERS FOR ENVIRONMENTAL PREDICTION
MODEL SIMULATIONS/SPACE WEATHER
CLIMATE & SEASONAL OUTLOOKS
AVIATION & MARINE FORECASTS
STORM & TORNADO PREDICTION
HURRICANE TRACKS

NATIONAL WEATHER SERVICE

Weather Forecast Offices Local Forecasts & Warnings

River Forecast Centers

River Forecasts, Hydropower, Flood warnings
Irrigation, River Navigation

Observations

Radar Network, Satellites, Weather Balloons, Ground-level observations at airports, Aircraft, Lightning Network, Data Buoys, Stream Gauge Network, 11,000 Volunteer daily-data collectors, Thousands of Volunteer storm spotters

Overview of NWS Operations

Observe

Process

Products & Services

Central Guidance

Local Offices

Distribute

Respond & Feedback

Feedback

Saving Lives Through Partnerships

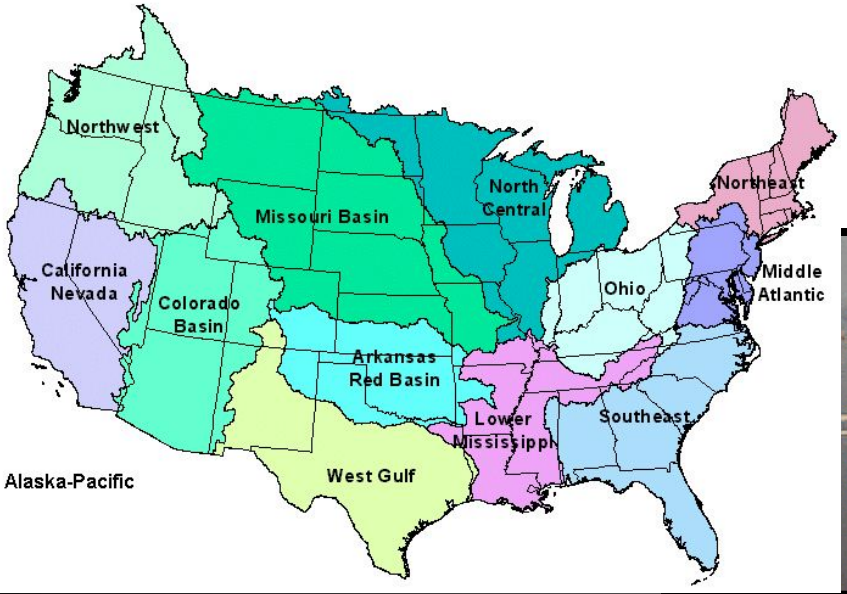
NOAA TEAM ⟷ PARTNERS ⟷ END USERS

NWS Overview
Weather Forecast Offices (WFOs)

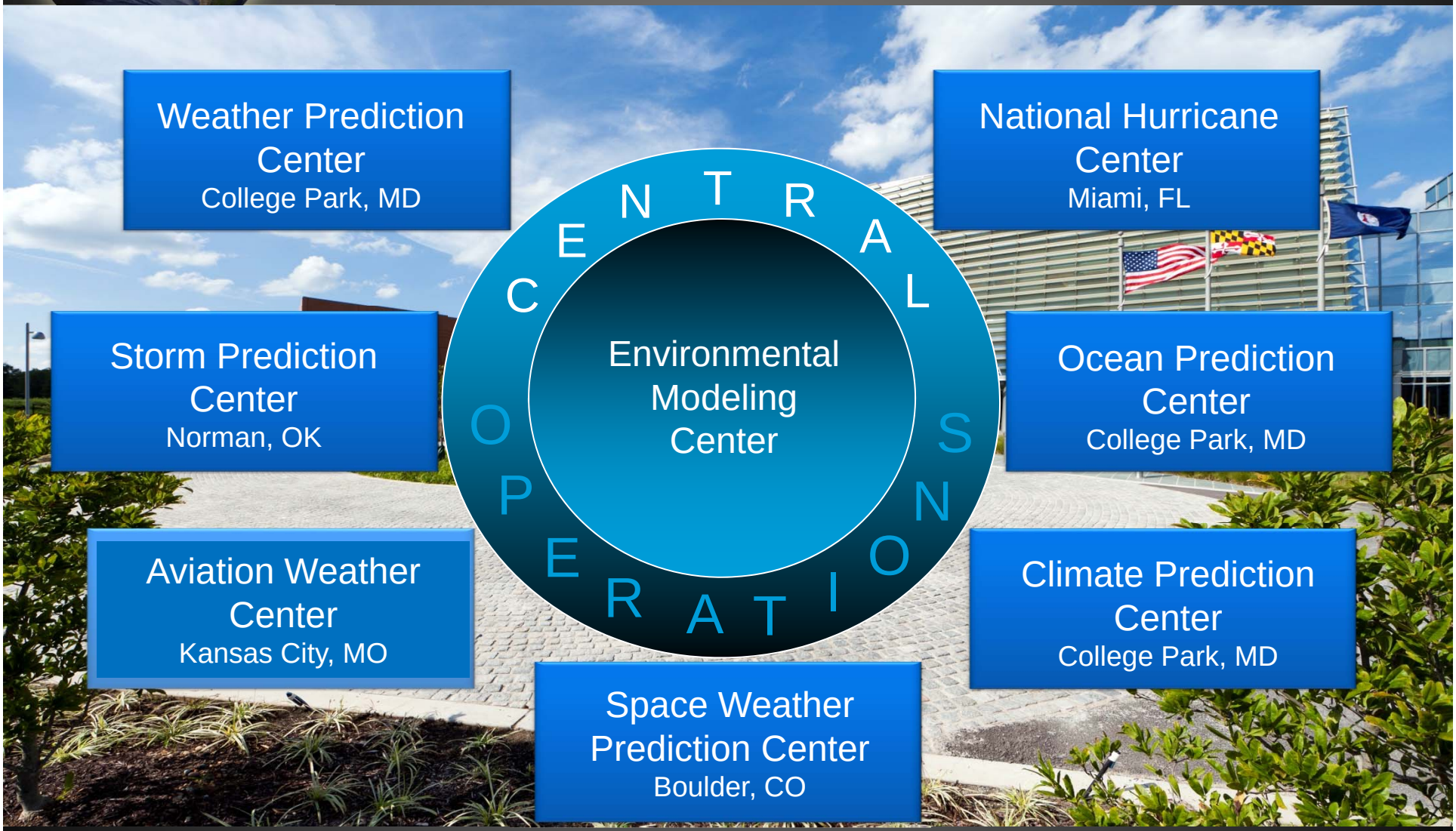
- Issue all Local Forecasts and Warnings
- Build and Maintain Relationships With Local and State Governments
- Provide Expert Advice to Emergency Managers and other Decision Makers
- Solicit Customer Feedback on Products and Services
- Conduct Community Awareness and Education Programs
- Train Volunteer Observers and Storm Spotters

NWS Overview
River Forecast Centers (RFCs)

- Issue river, reservoir and flood forecasts based on computer models
- Provide forecast guidance to Weather Forecast Offices (WFOs)
- Work with water managers and other Federal Agencies



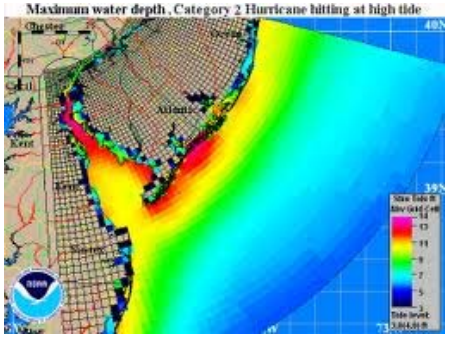
NWS Overview
National Centers

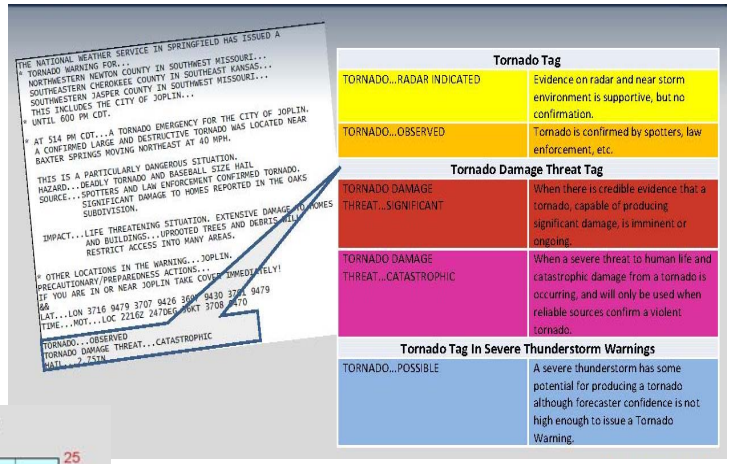


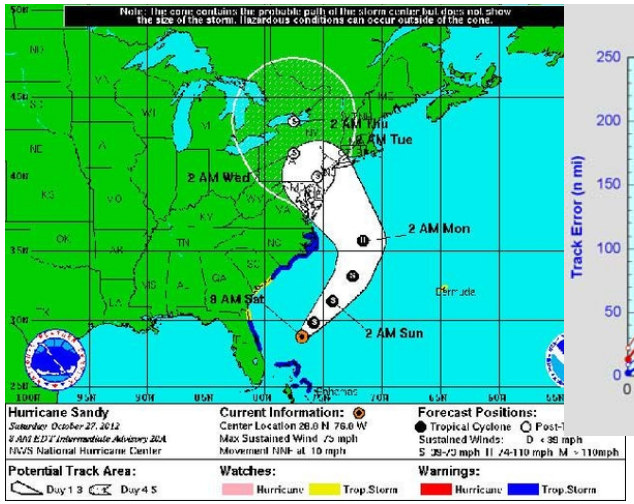
Warnings and Forecasts From the Sun to the Sea

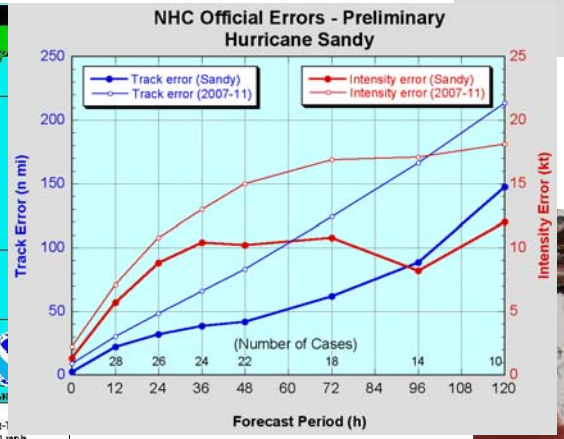
Delivering life-saving weather forecasts and warnings

Improved Hurricane forecasts





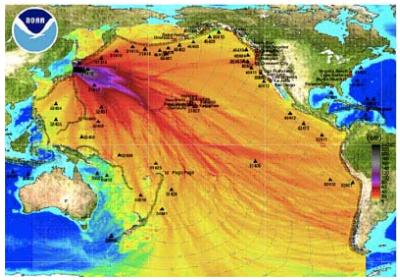




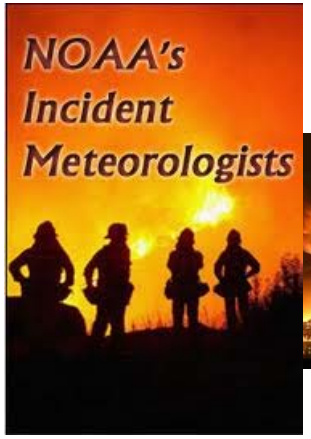
Impact-based tornado warnings

Warnings and Forecasts From the Sun to the Sea

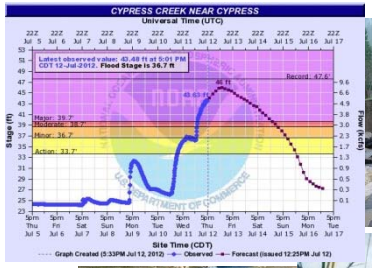
2011 Japan Tsunami: California Impacts



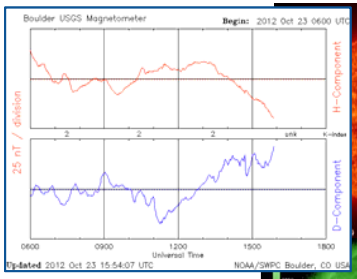
Winter Storm Forecasts
-Lead time of 2-3 days
-Close coordination with EMs
-Public prepared and aware

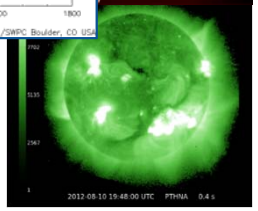


Wildfire Support
-177 IMETs dispatched



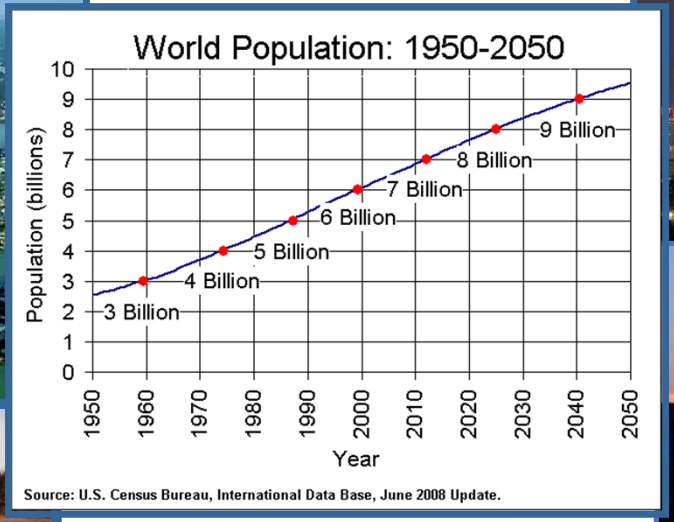
Drought and flood forecasting

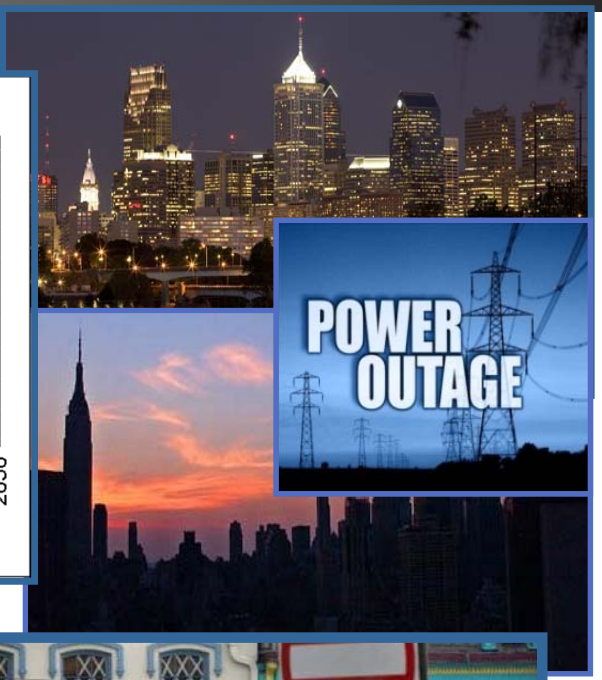


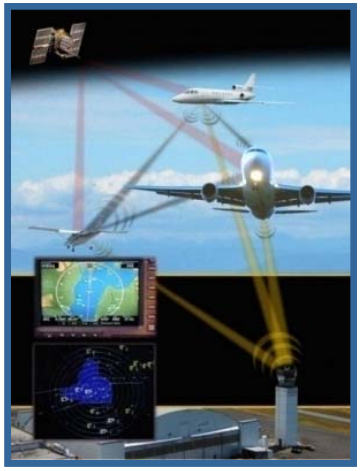


Improved space weather forecasting

A Changing World







Building a Weather-Ready Nation

NWS Strategic Plan:

- Improve weather decision services for events that threaten lives and livelihoods
- Deliver a broad suite of improved water forecasting services to support management of the Nation's water supply
- Enhance climate services to help communities, businesses, and governments understand and adapt to climate-related risks
- Enable integrated environmental forecast services supporting healthy communities and ecosystems
- Sustain a highly-skilled, professional workforce equipped with the training, tools, and infrastructure to accomplish our mission

NWS Changes

New and rapidly evolving needs from society call for the National Weather Service to shift from the way we forecast and warn today to an impact-based decision support services approach.

This new focus has four elements:

- better understanding of societal impacts,
- making our information more relevant to decision makers,
- participating directly in decision making for those decisions fundamental to the role of government, especially the protection of life and property, and
- counting on market forces to provide diverse decision-support services across the entire economy.

Way Forward

- **The Nation needs an agile NWS that:**
  - adjusts services to meet changing needs
  - adopts new science and technology, and new ways of operating, and
  - operates a fully transparent budget process

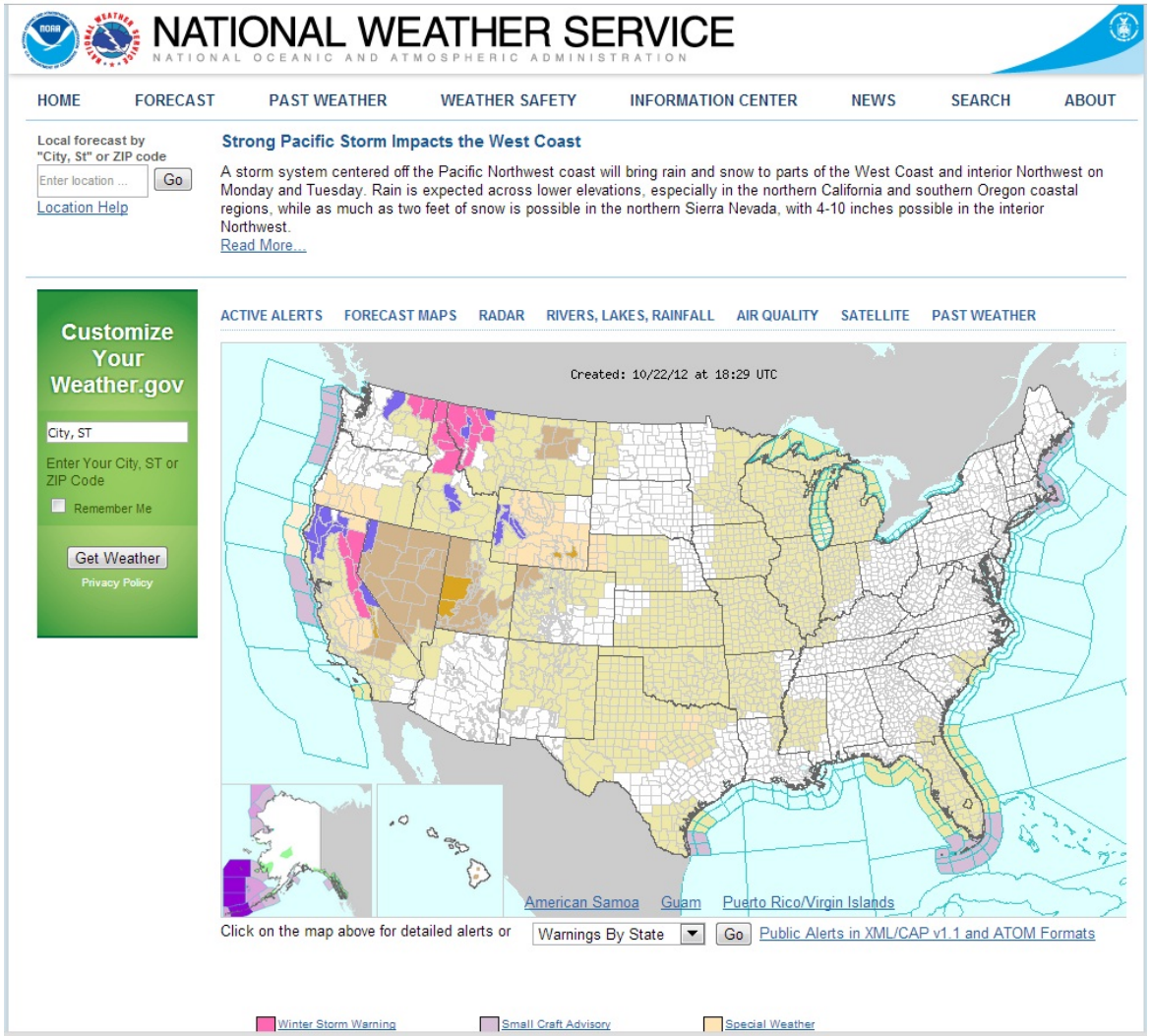
Way Forward
External Studies

- **National Academy of Sciences Report: *"Weather Services for the Nation: Becoming Second to None."* (August 2012)**
  - **Three main challenges:**
    - **Keeping pace with advances in science and technology**
    - **Meeting expanding and evolving user needs**
    - **Partnering with an increasingly capable enterprise**
- **National Academy of Public Administration (NAPA): Management and Operations Study**
  - **Validates Strategic Plan and Roadmap**
  - **Recommends—**
    - **realigned structure of budget and headquarters**
    - **efficiencies in dissemination and telecommunication**
    - **improved test and demonstration process**
    - **strengthened collaboration with NWSEO and stakeholders**
- http://www.napawash.org/publications/forecast-for-the-future-assuring-the-capacity-of-the-national-weather-service/

Way Forward -- Next Steps

- **Proposed Phases After NAPA Study Release:**
  - **Align NWS and key stakeholders on way forward**
  - **Expand innovation capacity**
  - **Operate new paradigm: *Innovation capacity informs and justifies incremental change***

The Future

A Weather-Ready Nation -- where Society is prepared for and responds to Weather-Dependent Events

www. weather.gov