Extreme Weather

The nation is threatened by many climate, water, and weather hazards every day.
The Many Disasters of 2015

U.S. 2015 Billion-Dollar Weather and Climate Disasters

- Western and Alaskan Wildfires Summer-Fall 2015
- Western Drought Entire Year
- Southern Plains Tornadoes May 6–10
- Texas and Oklahoma Flooding and Severe Weather May 23–26
- Texas Tornadoes and Midwest Flooding December 26–29
- South/Southeast Severe Weather April 18–20
- Central/Northeast Severe Weather June 21–25
- Central/Eastern Winter Storm, Cold Wave February 14–20
- South Carolina and East Coast Flooding October 1–5

This map denotes the approximate location for each of the ten billion-dollar weather and climate disasters that impacted the United States during 2016.

Weather-Ready Nation
The Many Disasters of 2016

U.S. 2016 Billion-Dollar Weather and Climate Disasters

- Rockies and Northeast Severe Weather July 28–30
- Rockies and Central Tornadoes and Severe Weather May 21–26
- Western and Eastern Drought Entire Year
- Plains Tornadoes and Central Severe Weather May 8–11
- West Virginia Flooding and Ohio Valley Tornadoes June 22–24
- Southeast and Eastern Tornadoes February 22–24
- Western and Southern Wildfires Summer–Fall 2016
- South and Southeast Tornadoes April 26–May 2
- Hurricane Matthew October 7–9
- North Texas Hail Storm March 23–24
- Houston Flooding April 17–18
- Texas and Louisiana Flooding March 8–12
- Louisiana Flooding August 12–15
- Southern Severe Weather March 17–18

This map denotes the approximate location for each of the 15 billion-dollar weather and climate disasters that have impacted the United States during 2016.
The Many Disasters of 2017

U.S. 2017 Billion-Dollar Weather and Climate Disasters

North Dakota, South Dakota, and Montana Drought Spring–Fall 2017

Western Wildfires, California Firestorm Summer–Fall 2017

California Flooding February 8–22

Colorado Hail Storm and Central Severe Weather May 8–11

Midwest Severe Weather June 27–29

Midwest Severe Weather June 12–16

South/Southeast Severe Weather March 26–28

Minnesota Hail Storm and Upper Midwest Severe Weather June 9–11

Midwest Tornado Outbreak March 6–8

Central/Southeast Tornado Outbreak February 28–March 1

Missouri and Arkansas Flooding and Central Severe Weather April 25–May 7

Southeast Freeze March 14–16

Southern Tornado Outbreak and Western Storms January 20–22

Hurricane Harvey August 25–31

Hurricane Irma September 6–12

Hurricane Maria September 19–21

This map denotes the approximate location for each of the 16 billion-dollar weather and climate disasters that impacted the United States during 2017.
Increasing Vulnerability

Becoming Weather-Ready is about building resilience in the face of increasing vulnerability to extreme weather.
A Changing World

Mean Center of Population for the United States: 1790 to 2010

U.S. Population (millions)

Projected
Becoming Weather-Ready

- Preparation
- Planning
- Communication
- Infrastructure
- Training

Weather-Ready Nation
StormReady

- Developed in Mid 90s
- Joint effort: Emergency Management and NWS
- Framework
- Recognition
StormReady: Key Parameters

- **Warning Reception**
  - NOAA Weather Radio
  - Television/Cable
  - Internet
  - Wireless
StormReady: Key Parameters

- Communication/Relay of Warning
  - Public Address
  - Siren
  - Email/Text Blast
  - Video Boards
StormReady: Key Parameters

- Hazardous Weather Response Plan
  - Print/Electronic
  - Available for Viewing
StormReady: Key Parameters

- **Sheltering Location**
  - Review all buildings/facilities
  - Structural engineer
StormReady: Key Parameters

- Preparedness
  - Annual Activity
    - Safety Fair
- Drills
- Distribute Safety Material
StormReady

- Application
  - StormReady web site
  - Contact your local NWS office
  - Warning Coordination Meteorologist (WCM)
We need partners’ help in transforming society to become:

*Ready, Responsive, and Resilient*

A Weather-Ready Nation requires our entire society to improve the way it incorporates weather information into decision making.

• **SOCIETAL RESPONSE EQUAL TO RISK** •
What it takes to be a WRN Ambassador:

- Be an example
- Promote Weather-Ready Nation messages
- Provide incentives to constituents, stakeholders
- Share your success stories
WRN Ambassadors Initiative

World Wide Technology

spire

Lewis County EMA

Missouri Department of Public Safety

SEMA State Emergency Management Agency

READY • RESPONSIVE • RESILIENT

Weather-Ready Nation
WRN Ambassadors Initiative

Drury Hotels
Costco
General Dynamics
Paramount Pictures
Simon Property Group
Federal Express
Miami Dolphins
Daytona International Speedway
Ryder Cup

READY • RESPONSIVE • RESILIENT
WRN Ambassadors Initiative

Arkansas State  
Brigham Young  
Boise State  
Cornell University  
Gonzaga University  
Indiana University  
Kansas State  
Michigan State  
Oklahoma State  
Purdue University  
South Dakota State  
Syracuse University

University of:  
Florida  
Georgia  
Guam  
Kentucky  
Maine  
Missouri  
Michigan  
Nebraska  
Tennessee  
Texas  
Vermont

READY • RESPONSIVE • RESILIENT

Weather-Ready Nation
NWS will provide direct support for large, primarily outdoor events:

- Contact local office and request support
- NWS will provide a daily briefing (if requested) of the expected weather
- NWS will maintain a weather watch and call the POC if weather approaches
NWS will provide direct support for large, primarily outdoor events:

- NWS will provide on-site support as requested
Jim Kramper
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National Weather Service, St. Louis, MO

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