

# National Oceanic and Atmospheric Administration

## *Building a Weather-Ready Nation 2011 in Review and Primary Threats in 2012*

**Dr. Jack Hayes**

NOAA Assistant Administrator for Weather Services and  
U.S. National Weather Service Director

NEMA

Alexandria, Virginia

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# 2011 Historic Year in Review



# 2011 Historic Year in Review

## NWS Performance

- AL Tornadoes
  - 24 min. lead time
- Joplin Tornado
  - 17 min. lead time
- Hurricane Irene
  - 5 day lead time
- Floods
  - 3 months lead time

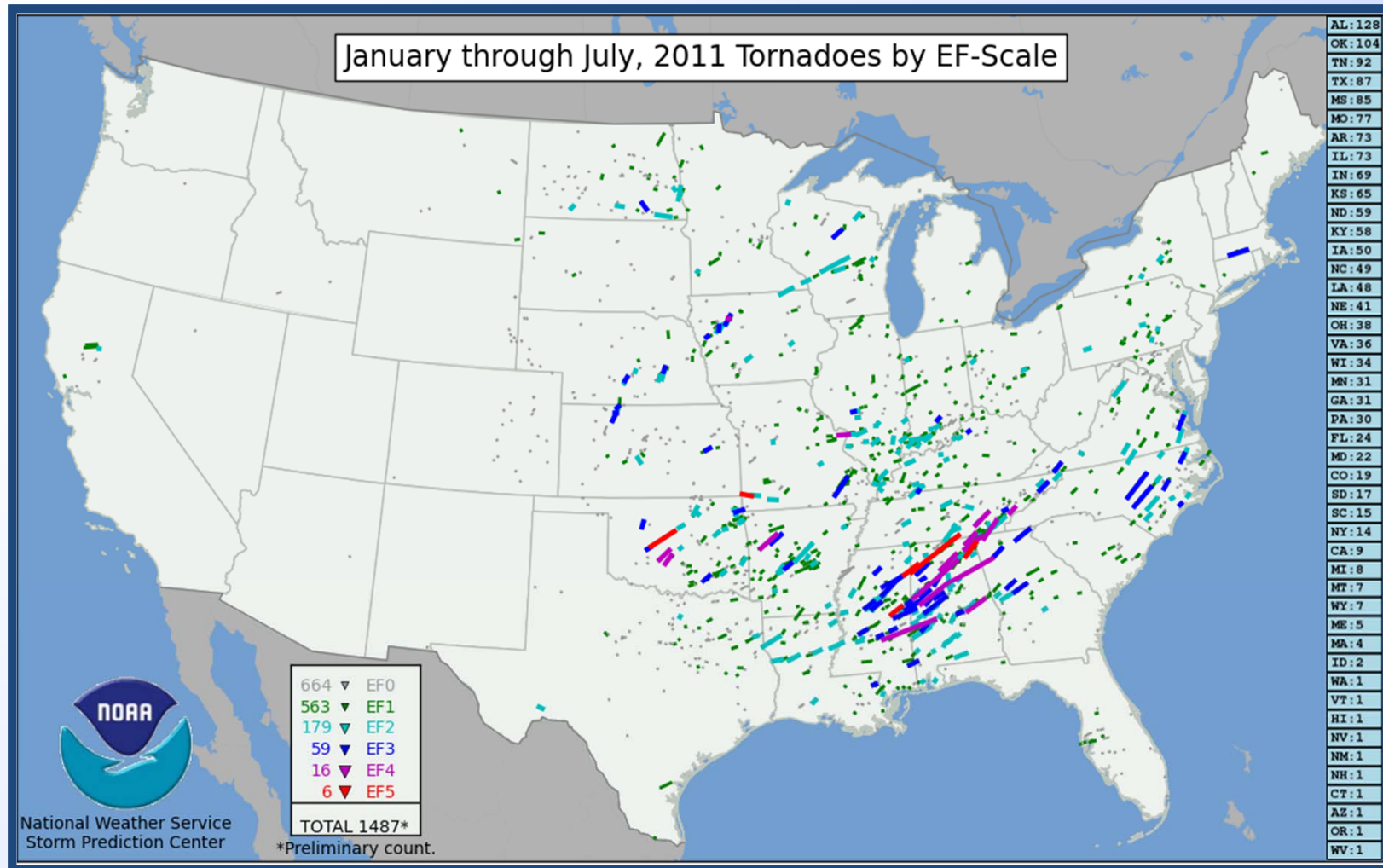


A residential neighborhood in Joplin, Mo  
(AP Photo/Tulsa World, Adam Wisneski)

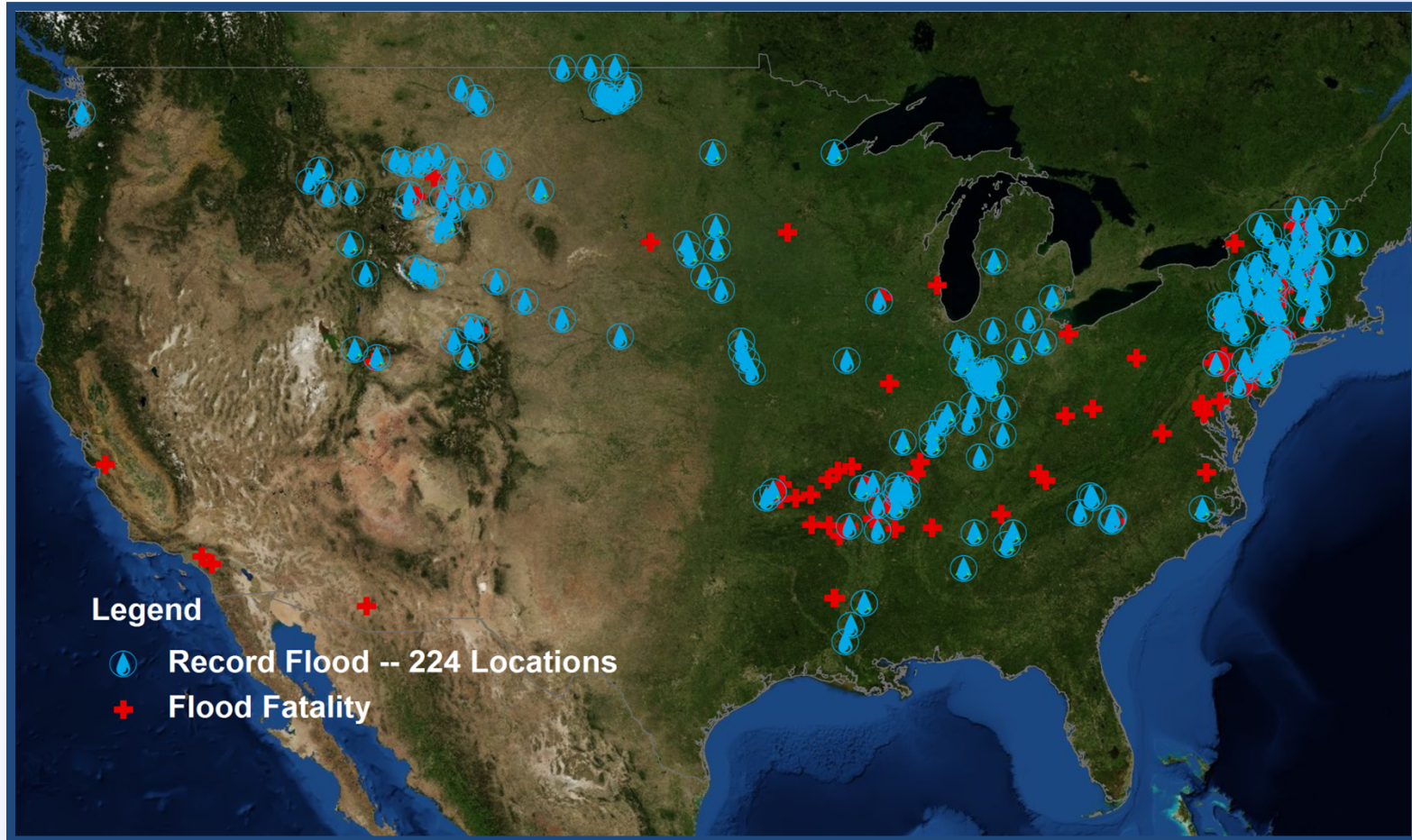
## Impacts

- 1,000 lives lost (8,000 injured)
  - Double the average number of fatalities in a year
  - 550 from tornadoes alone (fourth deadliest in U.S. history)
  - Joplin EF-5, 160 people died
- \$55B economic losses (14 disasters over \$1B each)

# 2011 Historic Tornadoes

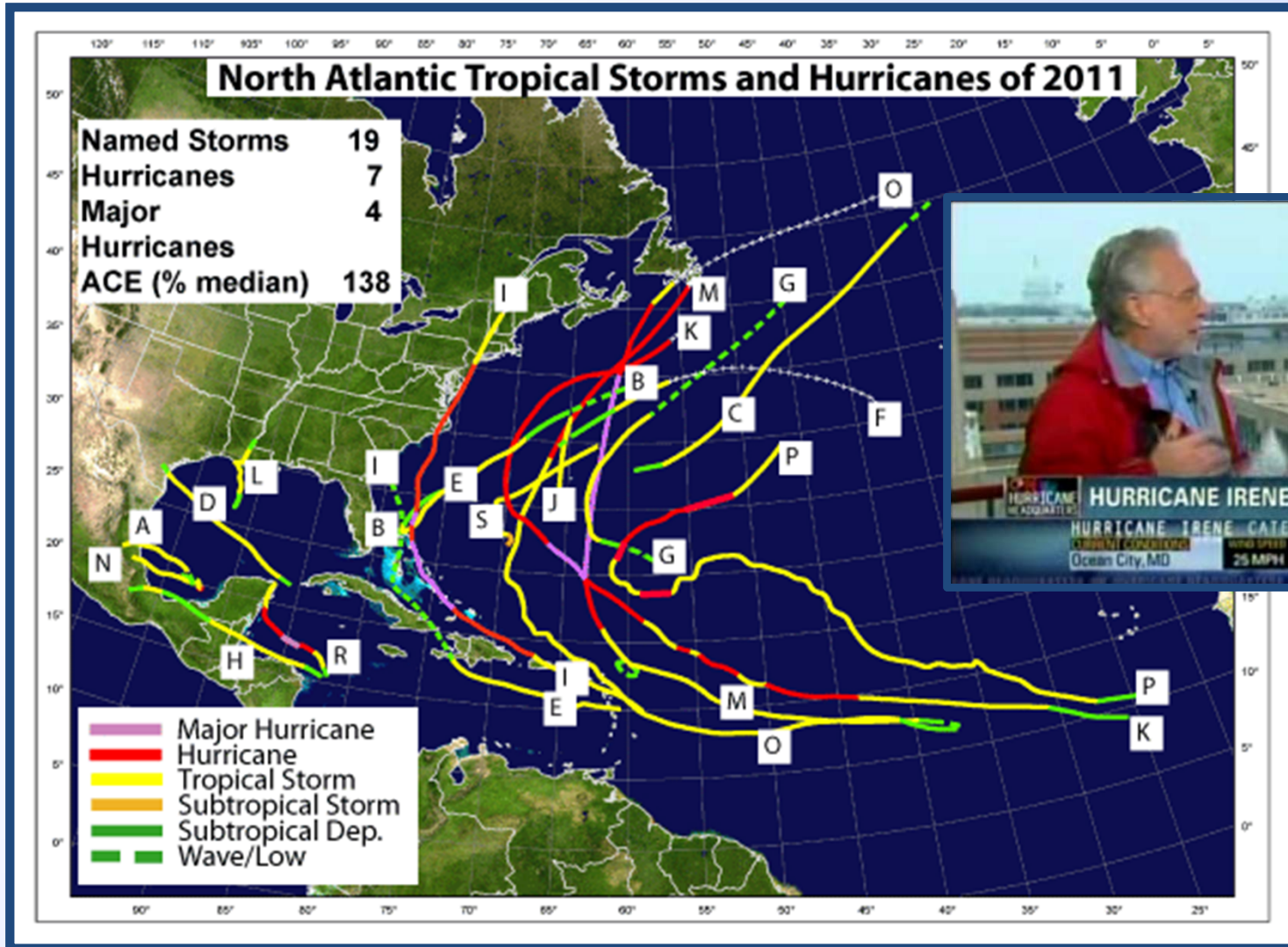


# 2011 Historic Floods



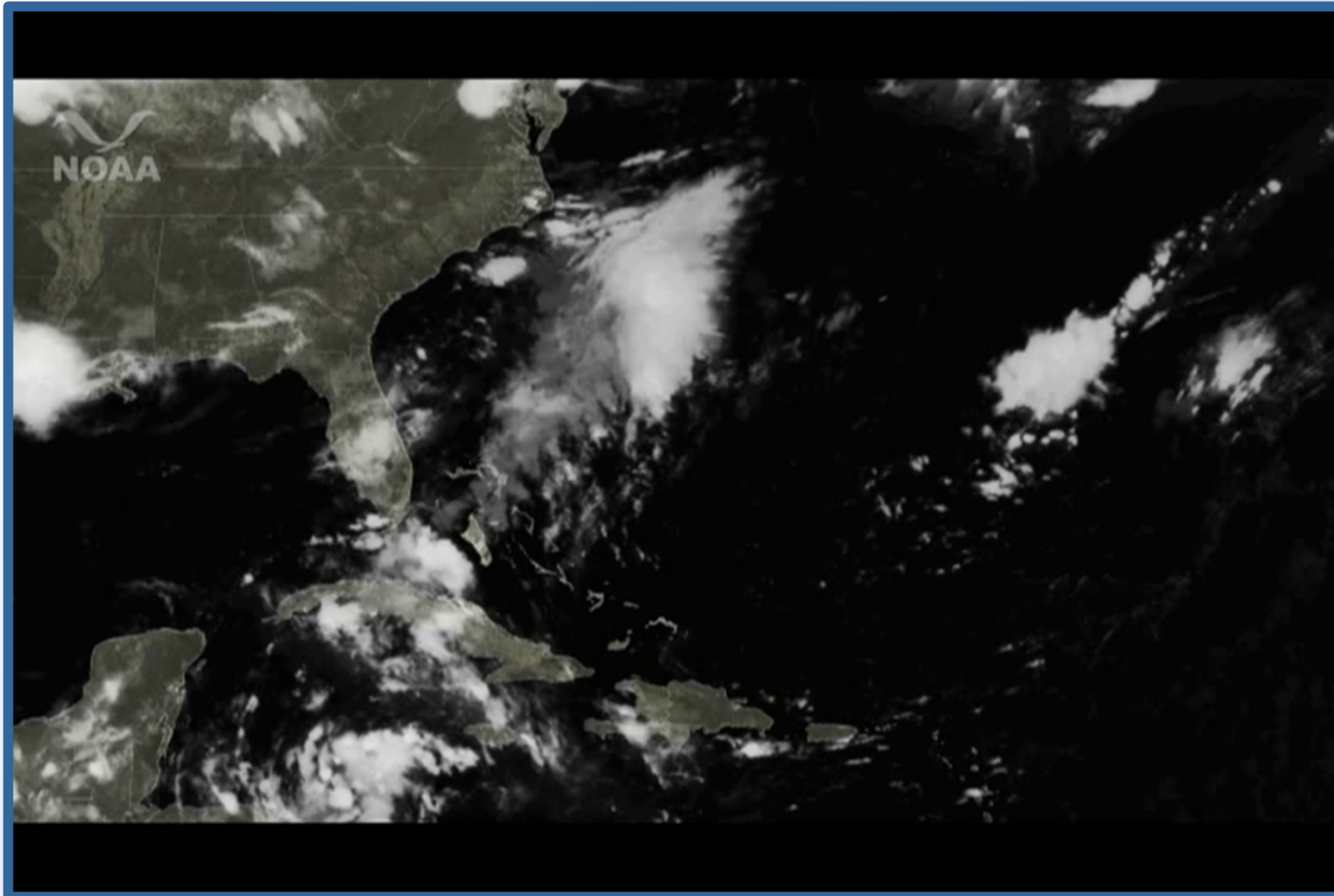
- Flooding caused 108 fatalities and \$8.3B in direct damages
- 71 fatalities attributed to flash floods

# 2011 Tropical Cyclones



# 2011 Tropical Cyclones

## *Hurricane Irene*



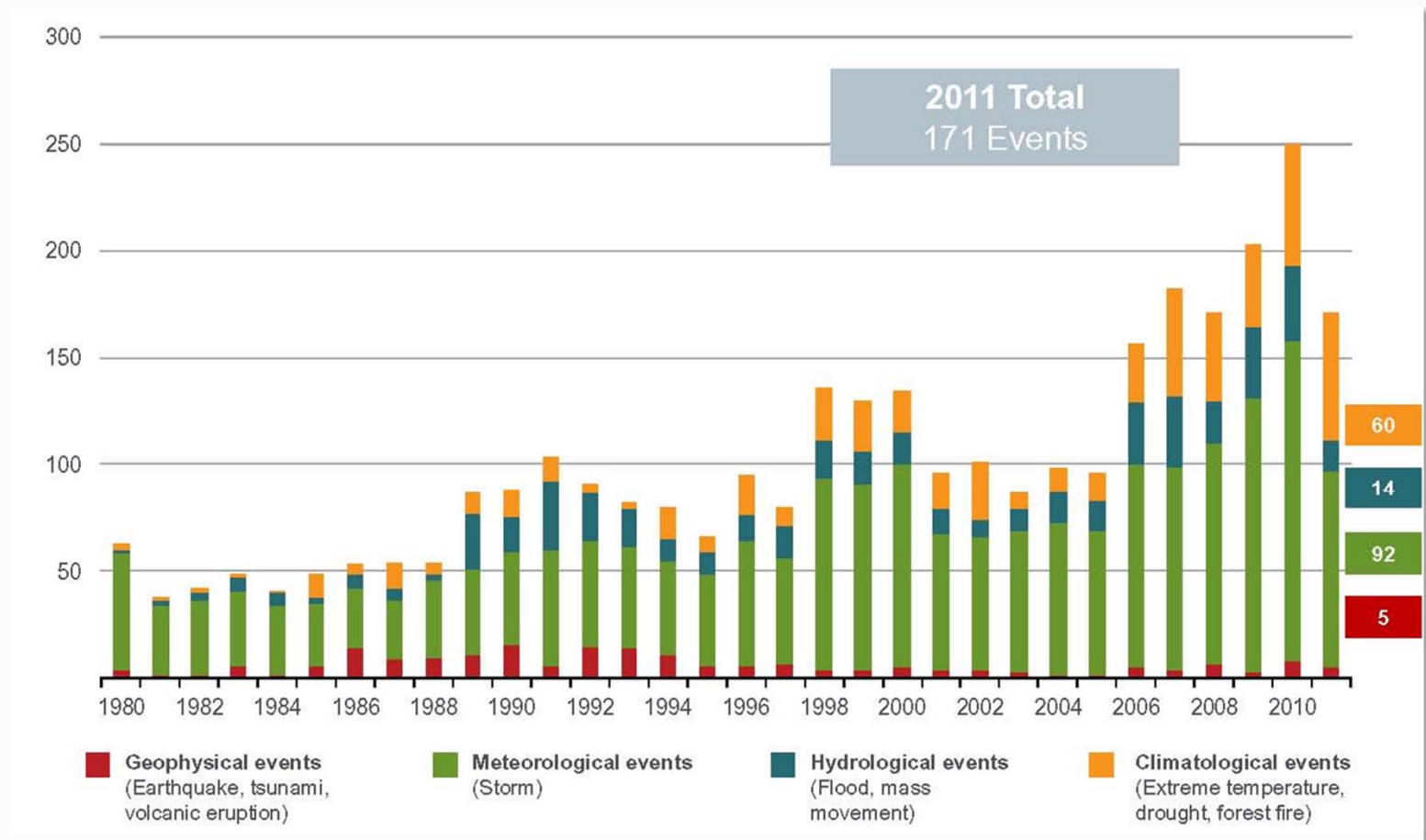
# A Changing World

## *Increased Vulnerability to High-Impact Weather*

U.S. Natural Catastrophe Update

Natural Disasters in the United States, 1980 – 2011

Number of Events, Annual Totals





# Weather-Ready Nation

A society is prepared for and responds to weather-dependent events



Goal: Improve weather decision services for events that threaten lives and livelihoods

# Primary Threats in 2012

## *Spring Flood Outlook*

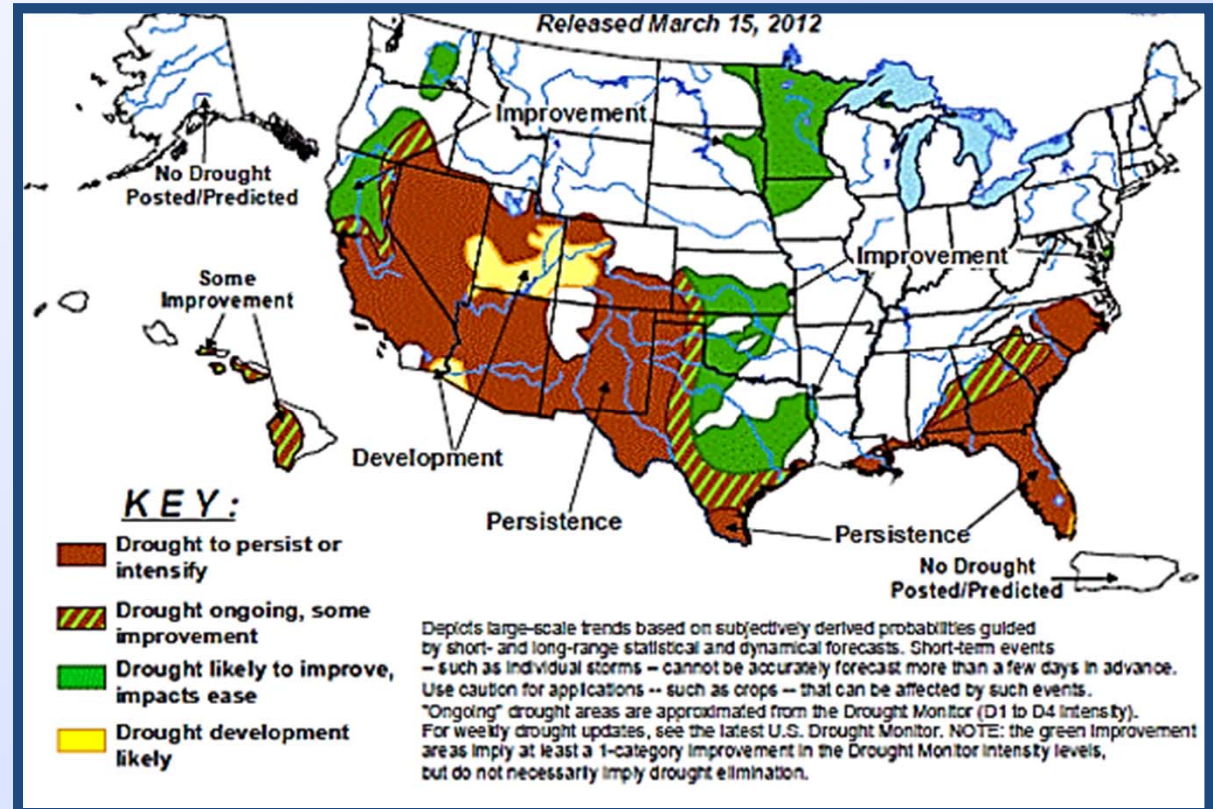


- For first time since 2008, no high risk areas forecasted
- Above normal river flood risk in Ohio Valley and portions of the Gulf Coast
- *Heavy rainfall at any time can lead to river and/or flash flooding, even in areas where overall flood risk is below normal.*

# Primary Threats in 2012

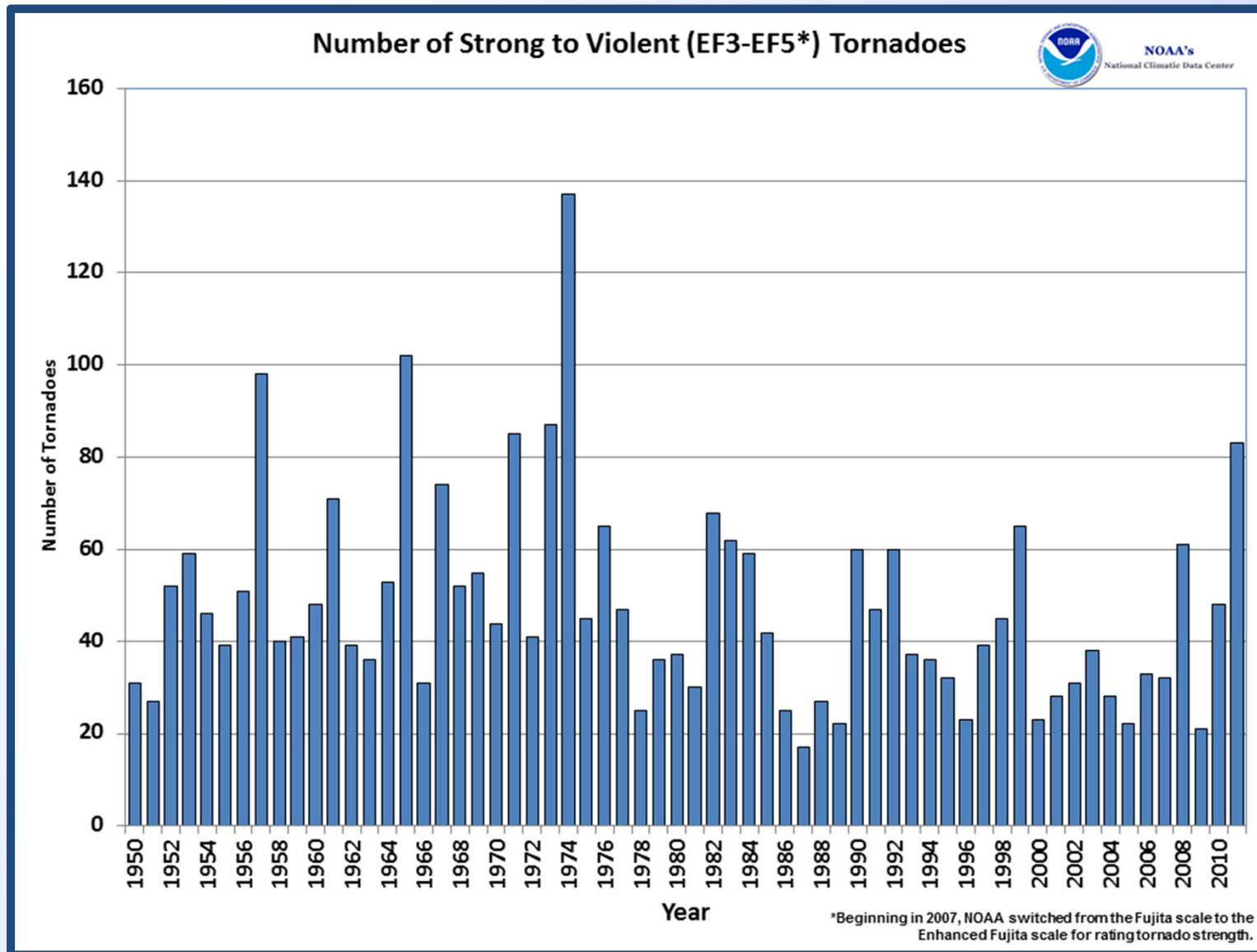
## *Drought Outlook*

- Drought conditions to persist across most of the Southern U.S. and expand in the Southwest through spring
- Improvement is possible from the southern and central Plains to the southern Appalachians, in the upper Midwest, and the Northwest
- Southwest is moving into the dry season which should diminish chances for relief.



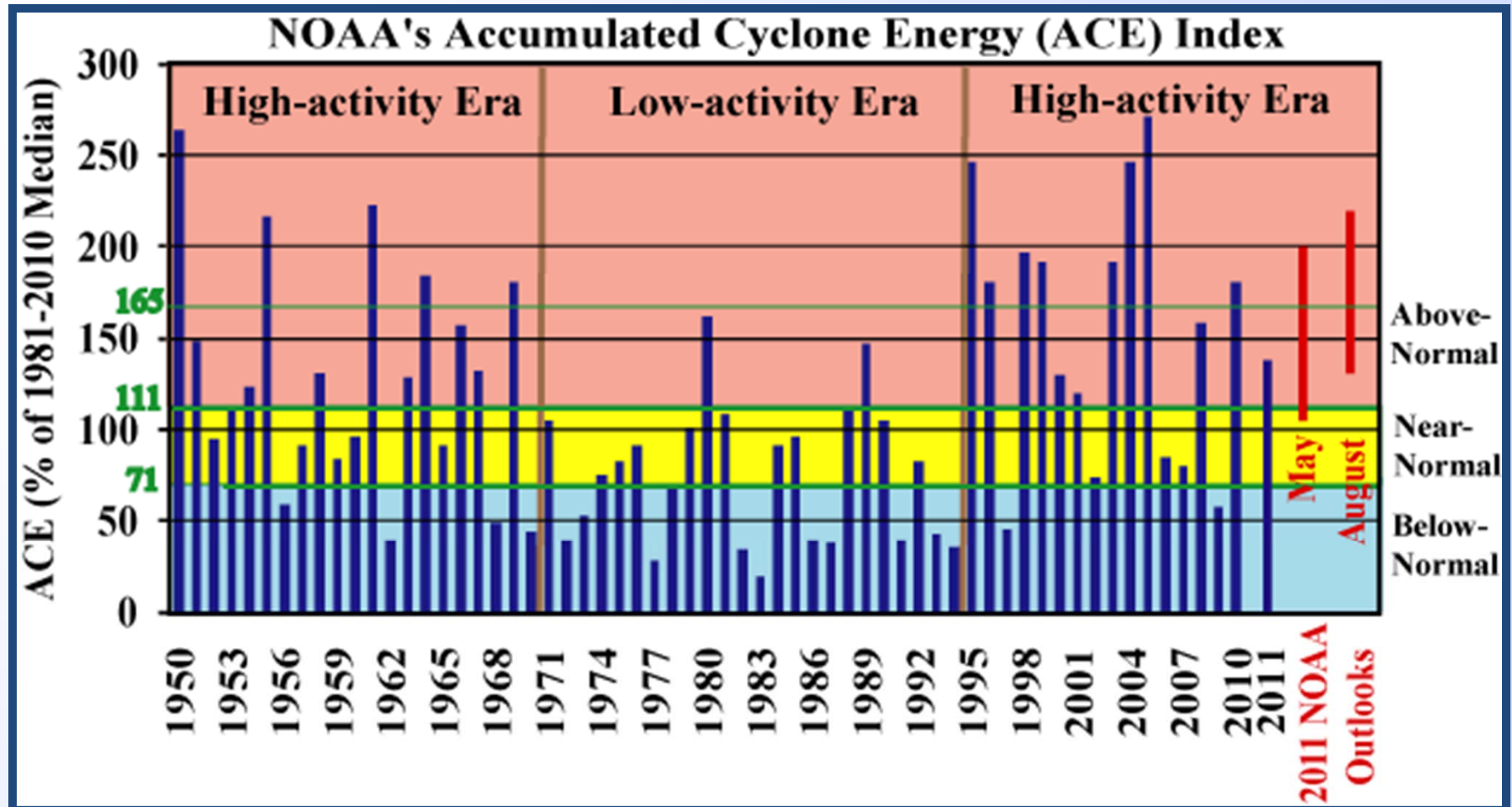
# Primary Threats in 2012

## *Tornadoes*



# Primary Threats in 2012

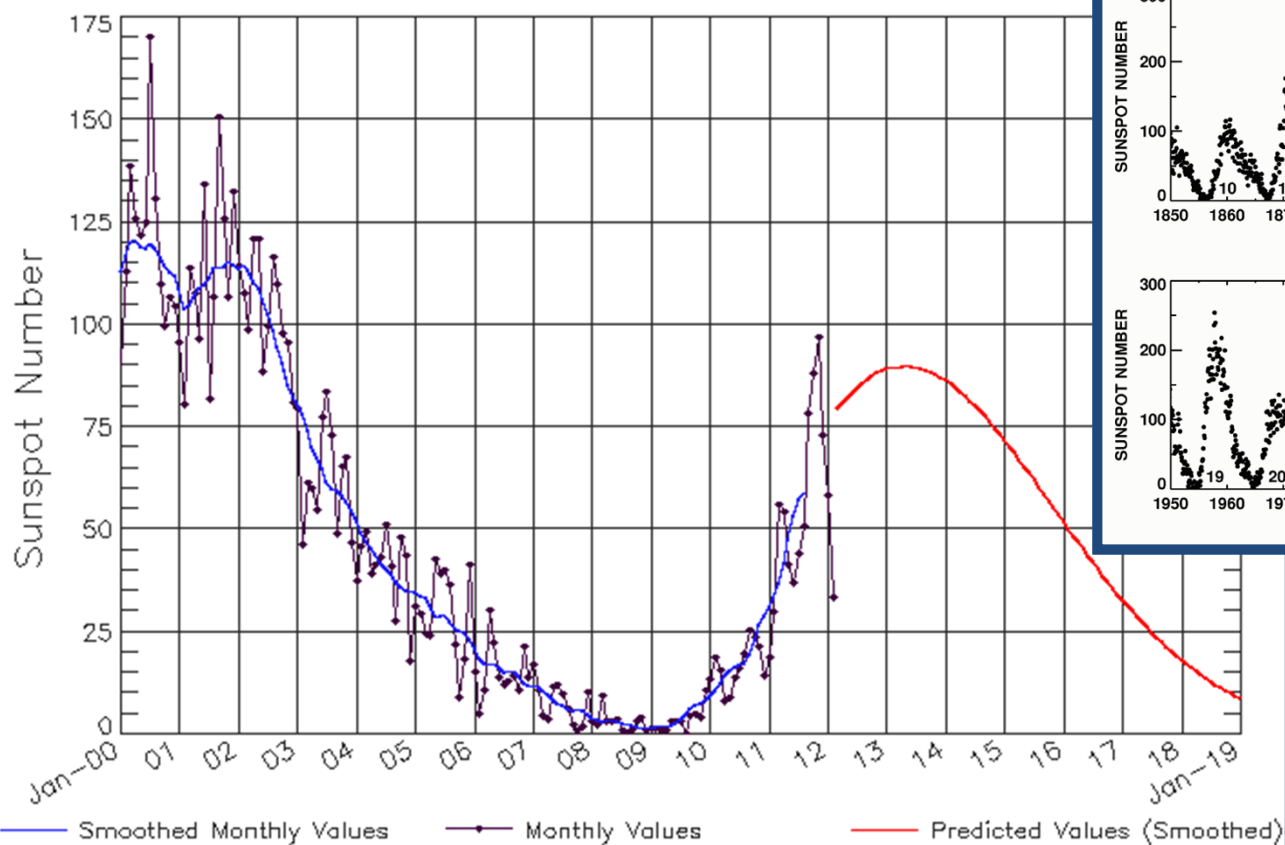
## *High-Activity Tropical Cyclone Era*



# Primary Threats in 2012

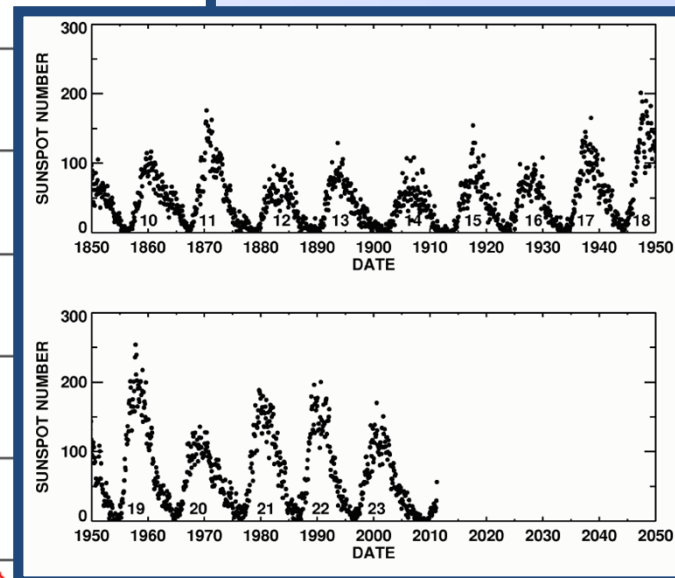
## *Space Weather*

### 2011 Sunspot Number Progressions



Updated 2012 Mar 12

NOAA/SWPC Boulder, CO USA



- Solar minimum in December 2008
- Solar Cycle 24 now well underway
- Cycle 24 maximum forecast - May 2013

