

# Forecasting Tornadoes

# Strategy:

- **Forecast large-scale conditions 1-3 days in advance**
  - Issue tornado watches 12-24 hours in advance
- **Spot developing storms, tornadoes**
  - Issue tornado warnings 1-20 minutes in advance

# Forecasting Large-Scale Conditions

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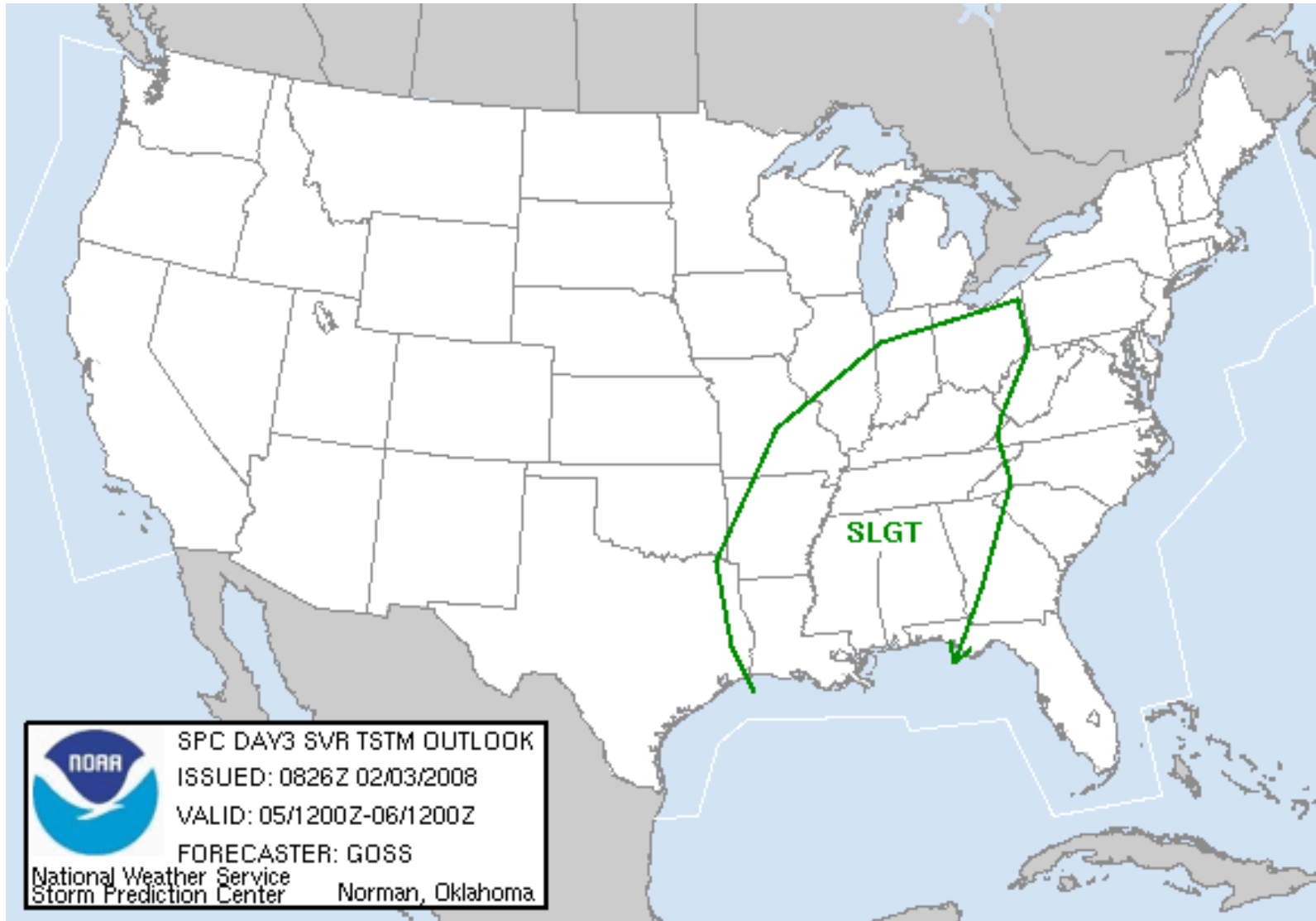
[http://www.jondavies.net/tornado\\_fcsting/sprcltor\\_composite2.gif](http://www.jondavies.net/tornado_fcsting/sprcltor_composite2.gif)

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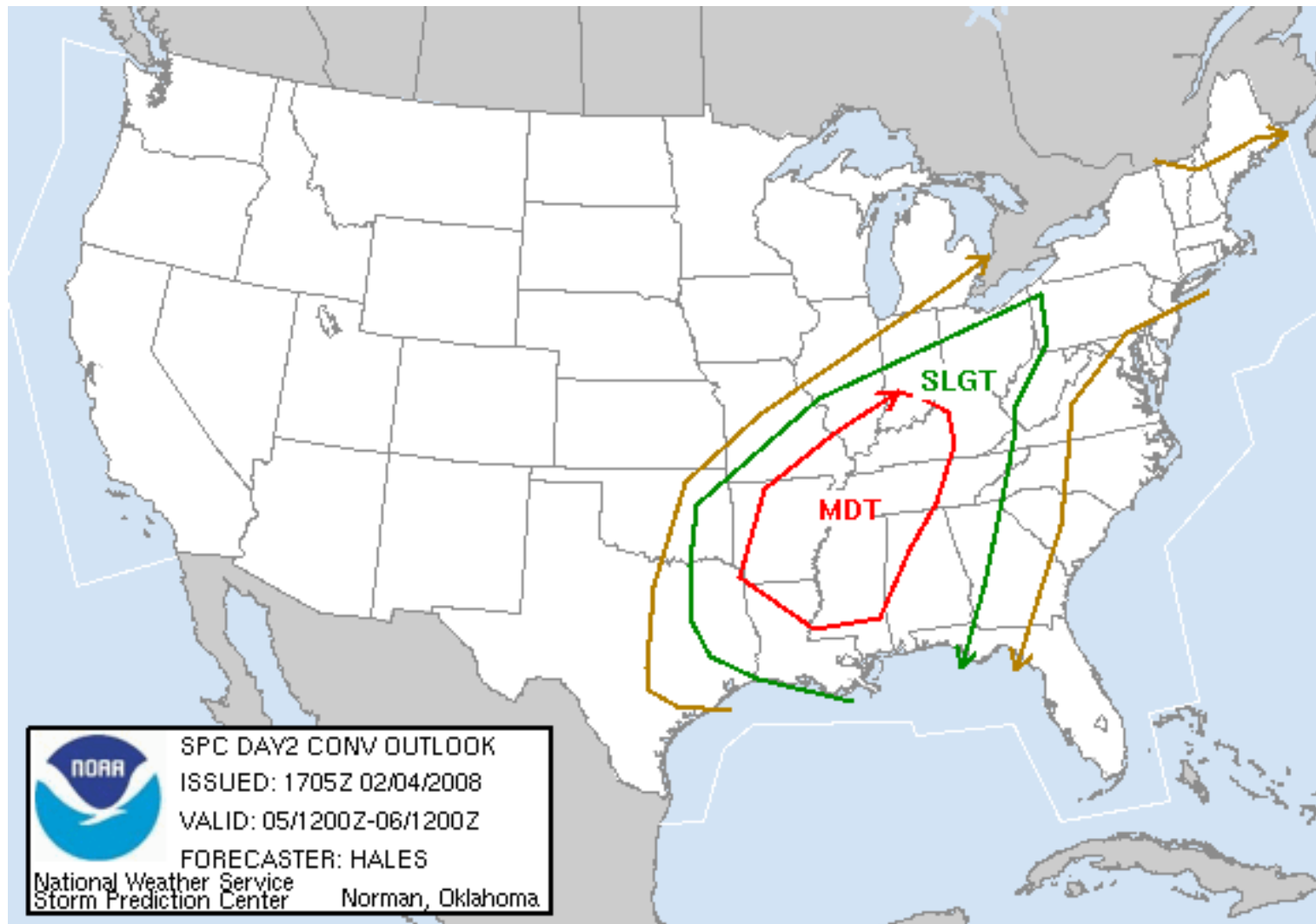
Please see the image on:

[http://www.jondavies.net/tornado\\_fcsting/sprcltor\\_composite1.gif](http://www.jondavies.net/tornado_fcsting/sprcltor_composite1.gif)

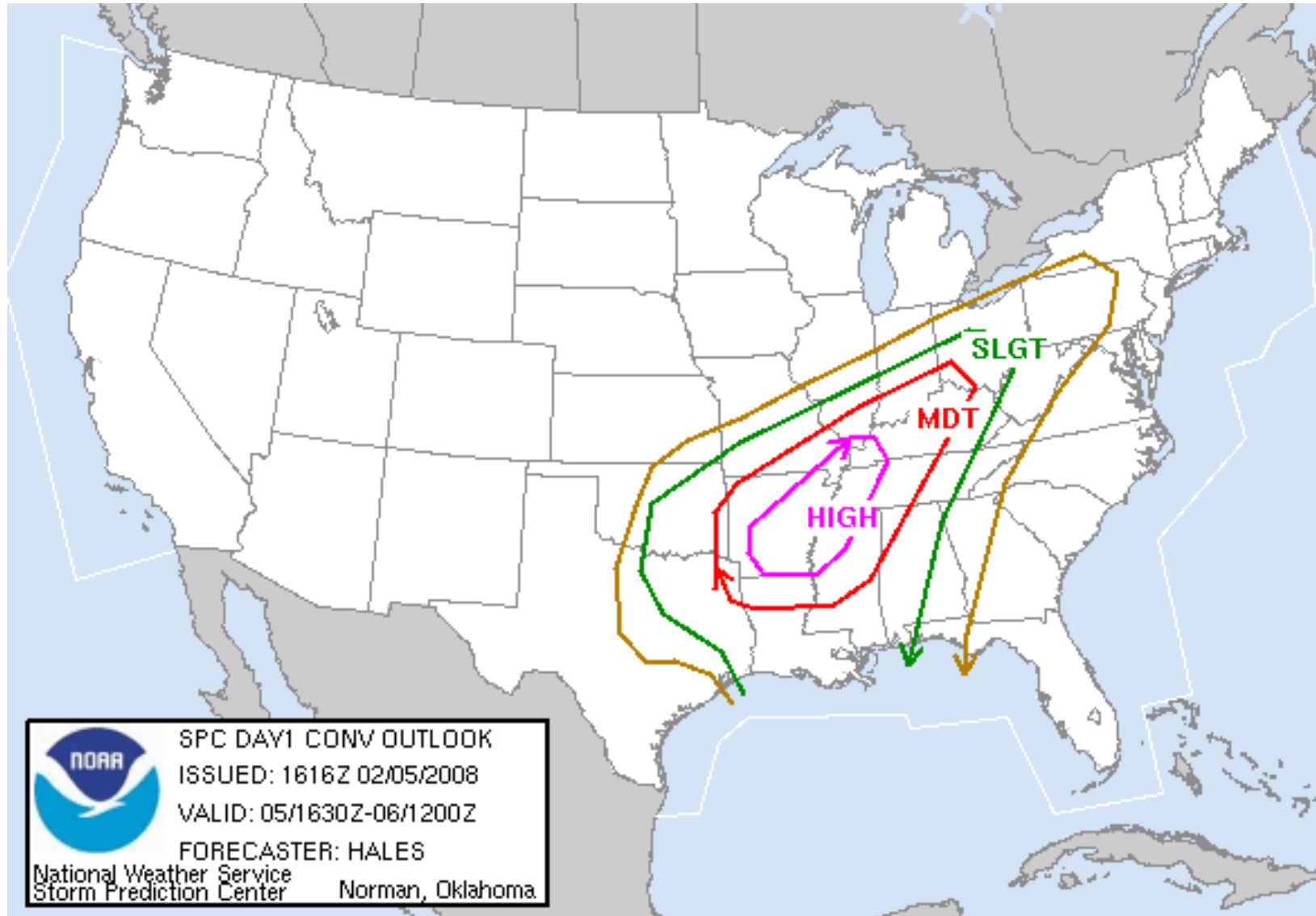
# 3-Day Outlook, February 3<sup>rd</sup> 2008



# 2-Day Outlook, February 4<sup>th</sup> 2008



# 1-Day Outlook, February 5<sup>th</sup> 2008





# Real-time Spotting

# From Satellite

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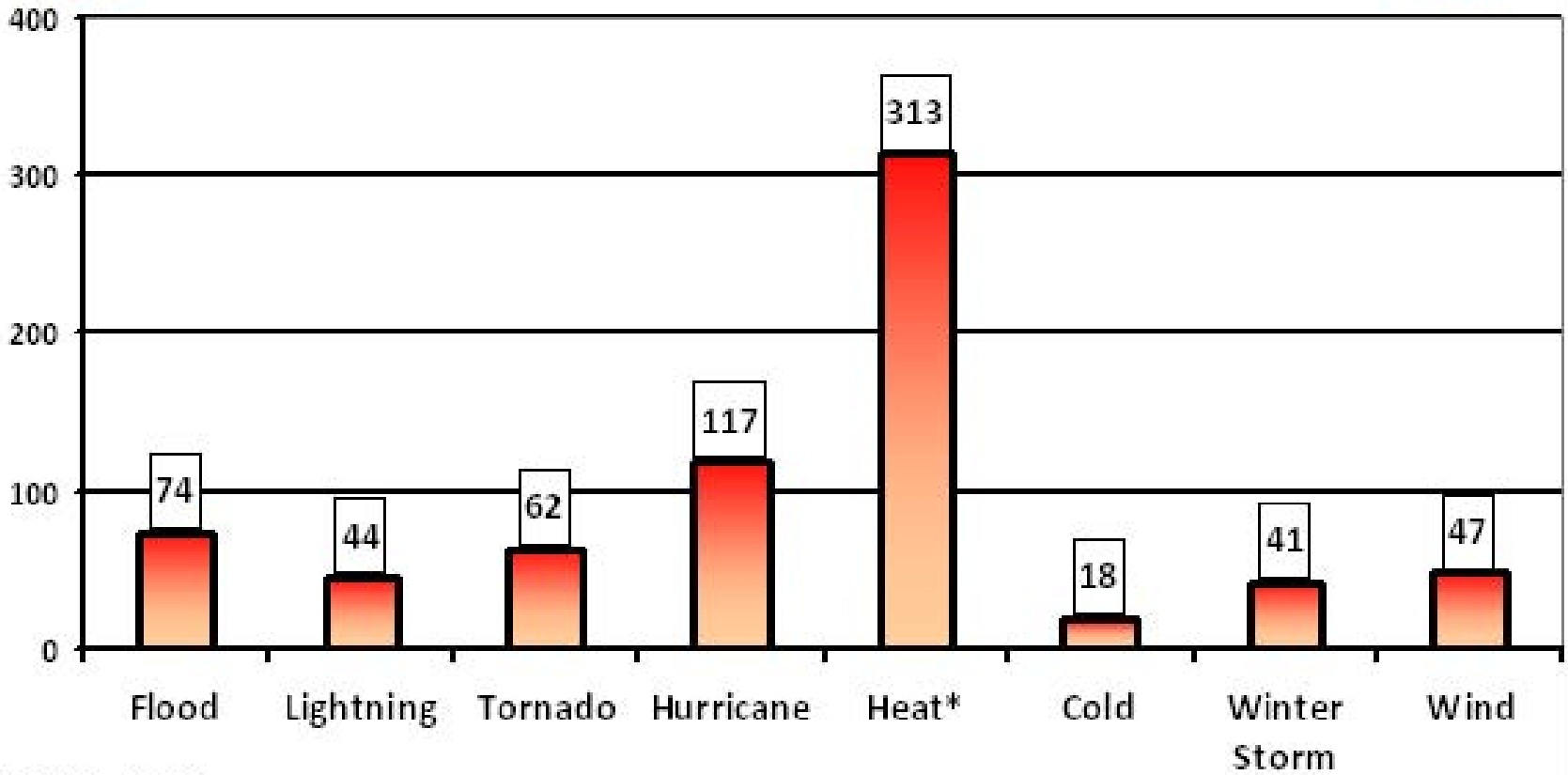
Please see the similar image on:

<http://www.wunderground.com/hurricane/2009/UShazards.png>



# Average Number of U.S. Weather-Related Deaths per Year

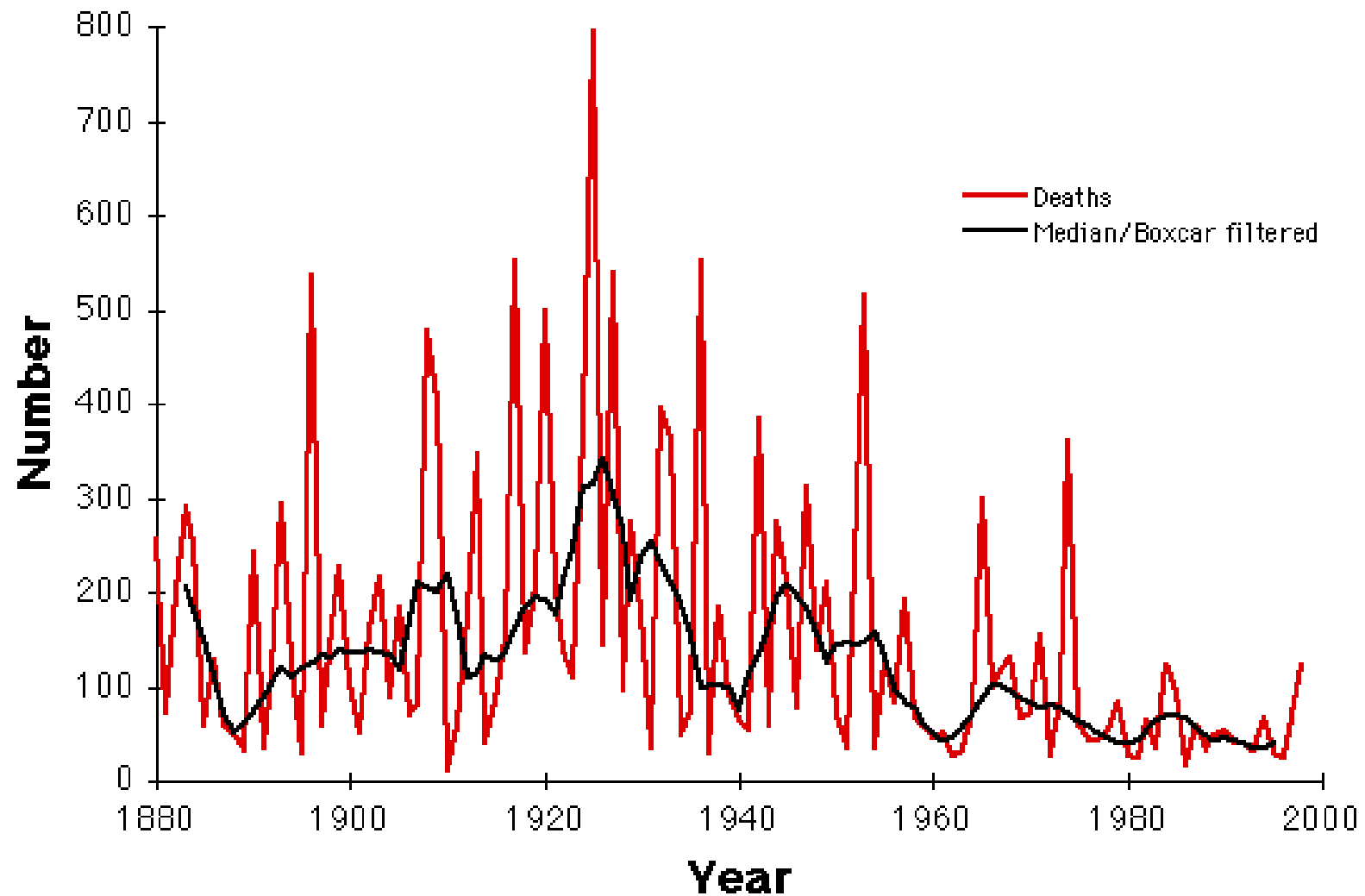
1997 - 2006



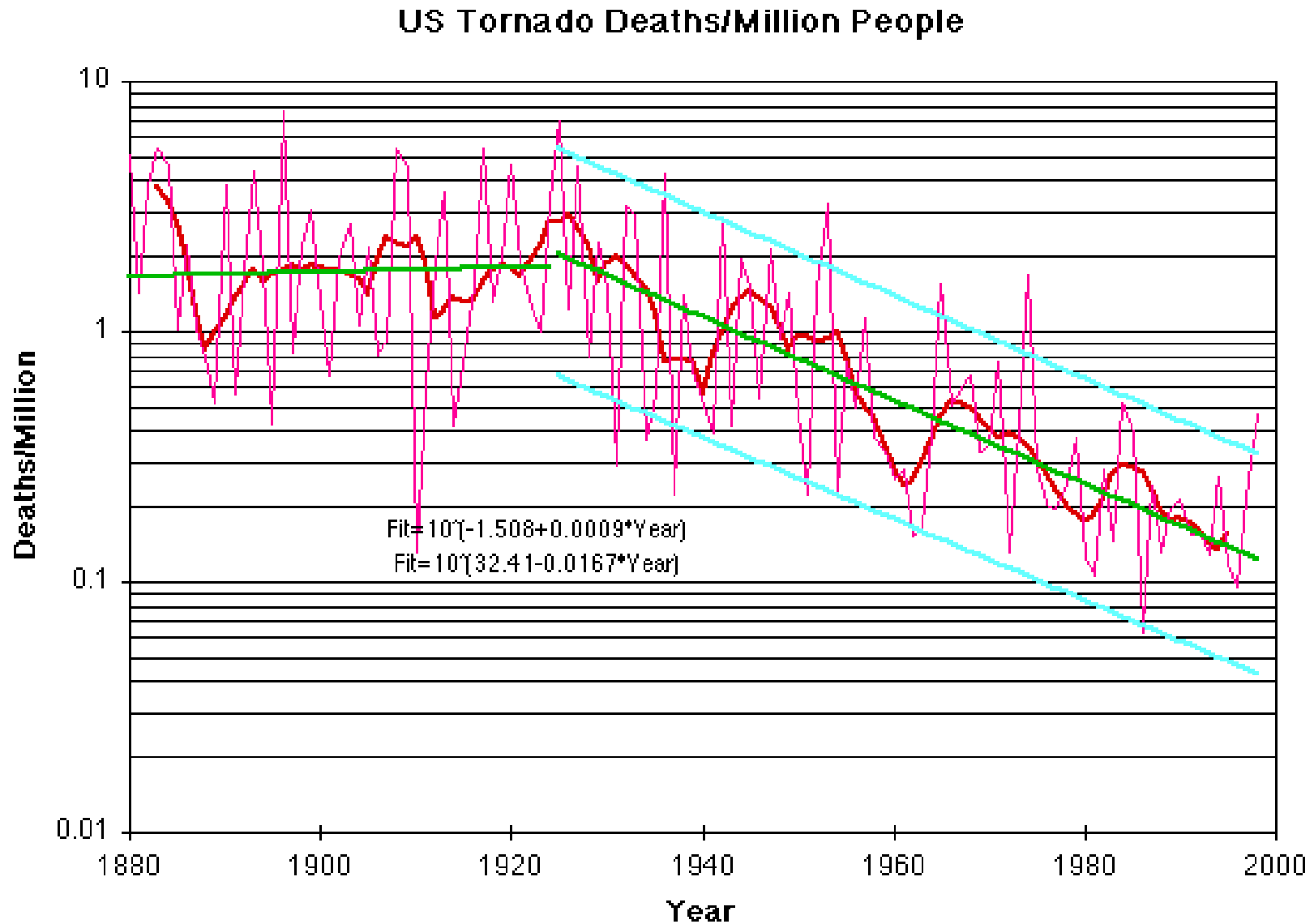
\* 1992 - 2002

# Raw Annual U.S. Tornado Fatalities

## U.S. Tornado Fatalities



# Annual U.S. Tornado Fatalities per Unit Population



# Saving Lives

- Communicating warnings
  - Tornado sirens
  - TV, radio, and weather radio
  - Reverse 911
- Safe havens
  - Building codes
  - Tornado shelters
  - Schools, hospitals and other large public spaces
  - Mobile homes
  - Safe rooms



- Public education
  - Schools
  - Web information
  - Documentaries
- Communicating Risk
  - Insurance regulation
  - Disaster declarations

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12.103 Science and Policy of Natural Hazards  
Spring 2010

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