

**SEVERE WEATHER
CLIMATOLOGY
FOR THE BLACKSBURG, VA
WFO COUNTY WARNING
AREA**

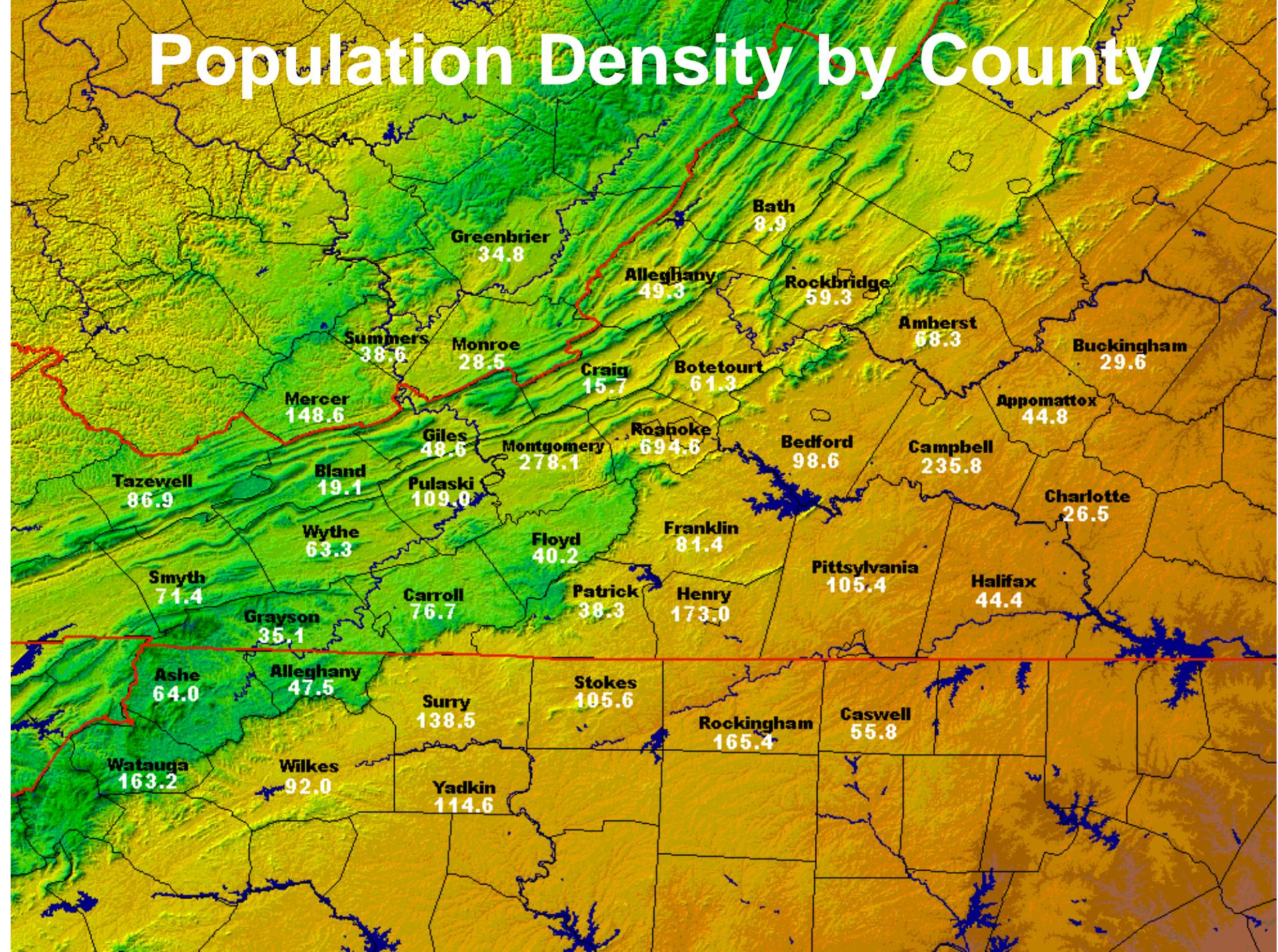
Updated through 2013 by
Robert Stonefield
and Kayla Jordan

National Weather Service Forecast Office
Blacksburg, Virginia

Informational Tidbits

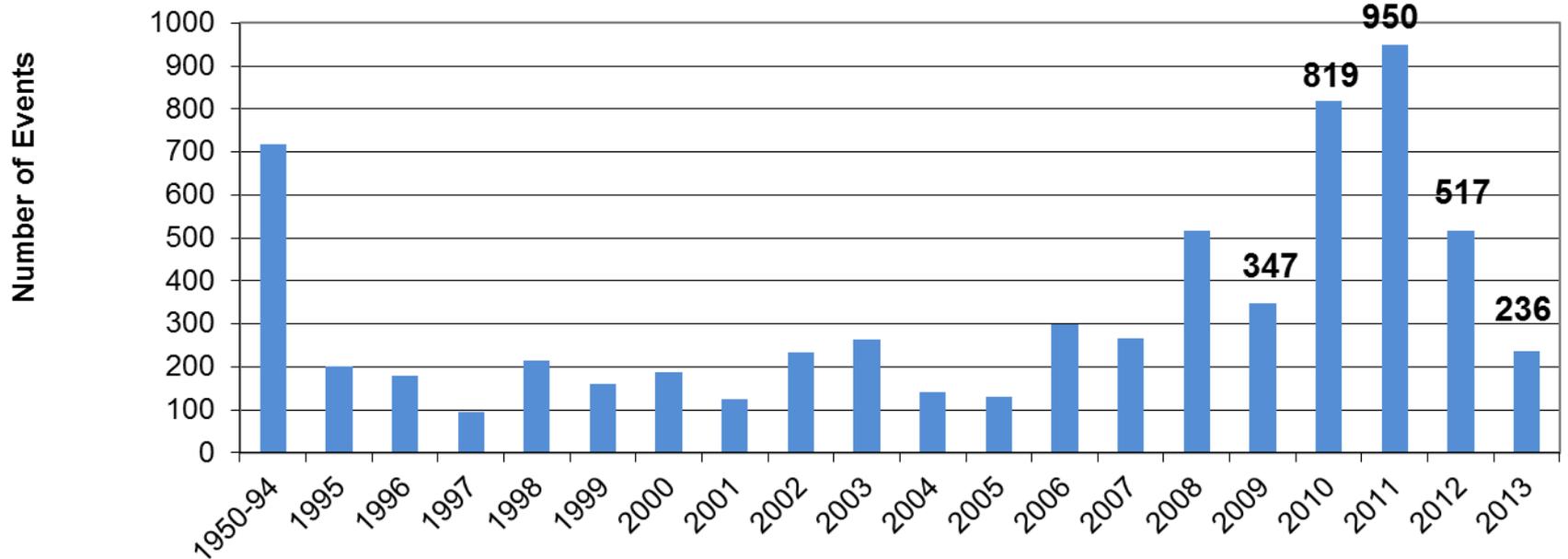
- 6601 Severe Weather Reports (Tornado, Hail and Wind) from 1950 to 2013.
- Data collected from NCDC and SPC.
- Demographics: 1.8 million people across 20,000 square miles.
- 1.2 million people reside east of the Blue Ridge.

Population Density by County



All Severe Weather Reports by Year (1950-2013)

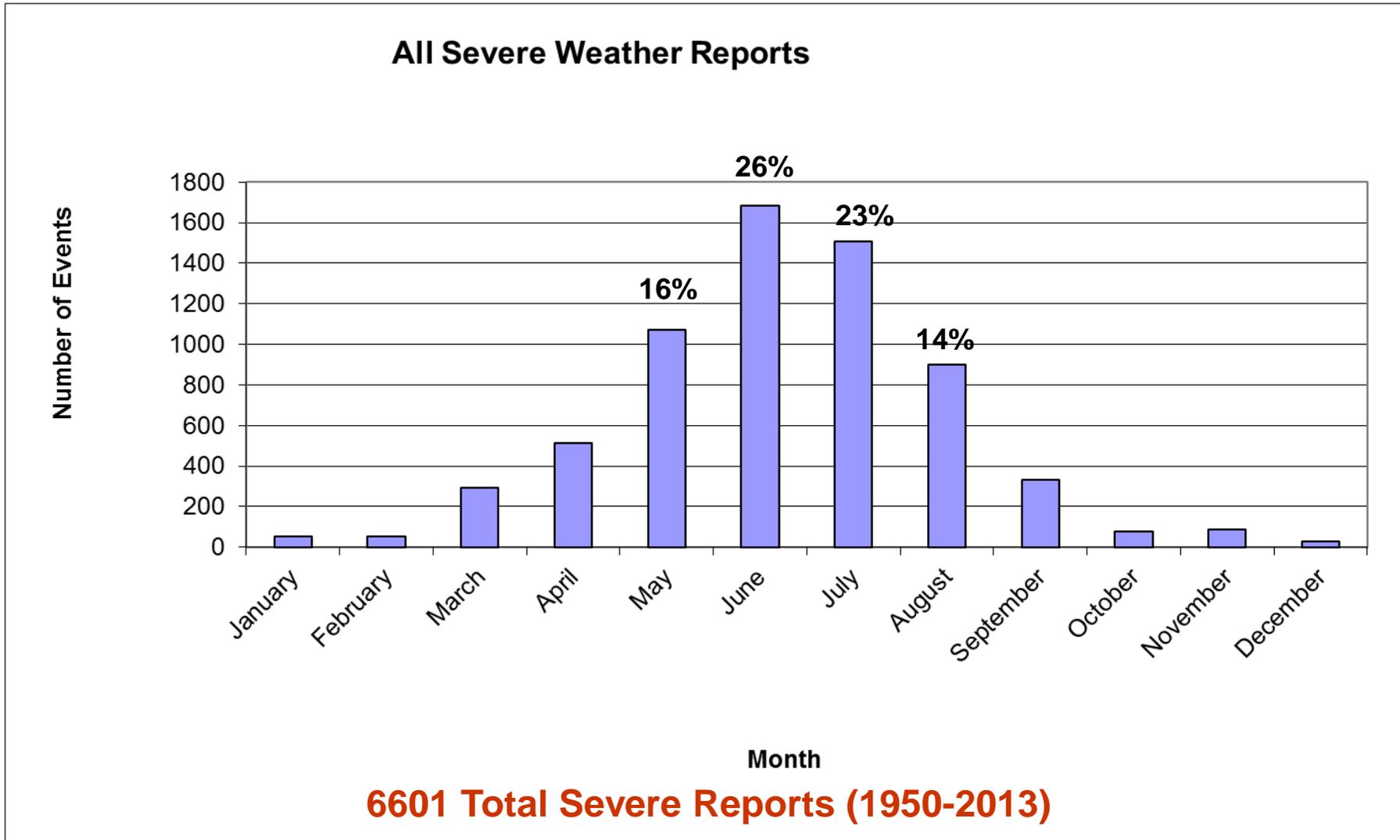
All Severe Weather Reports



6601 Severe Reports
152 Tornadoes
1397 Hail (>/= 1.00 inch)
5052 Convective Wind

Month

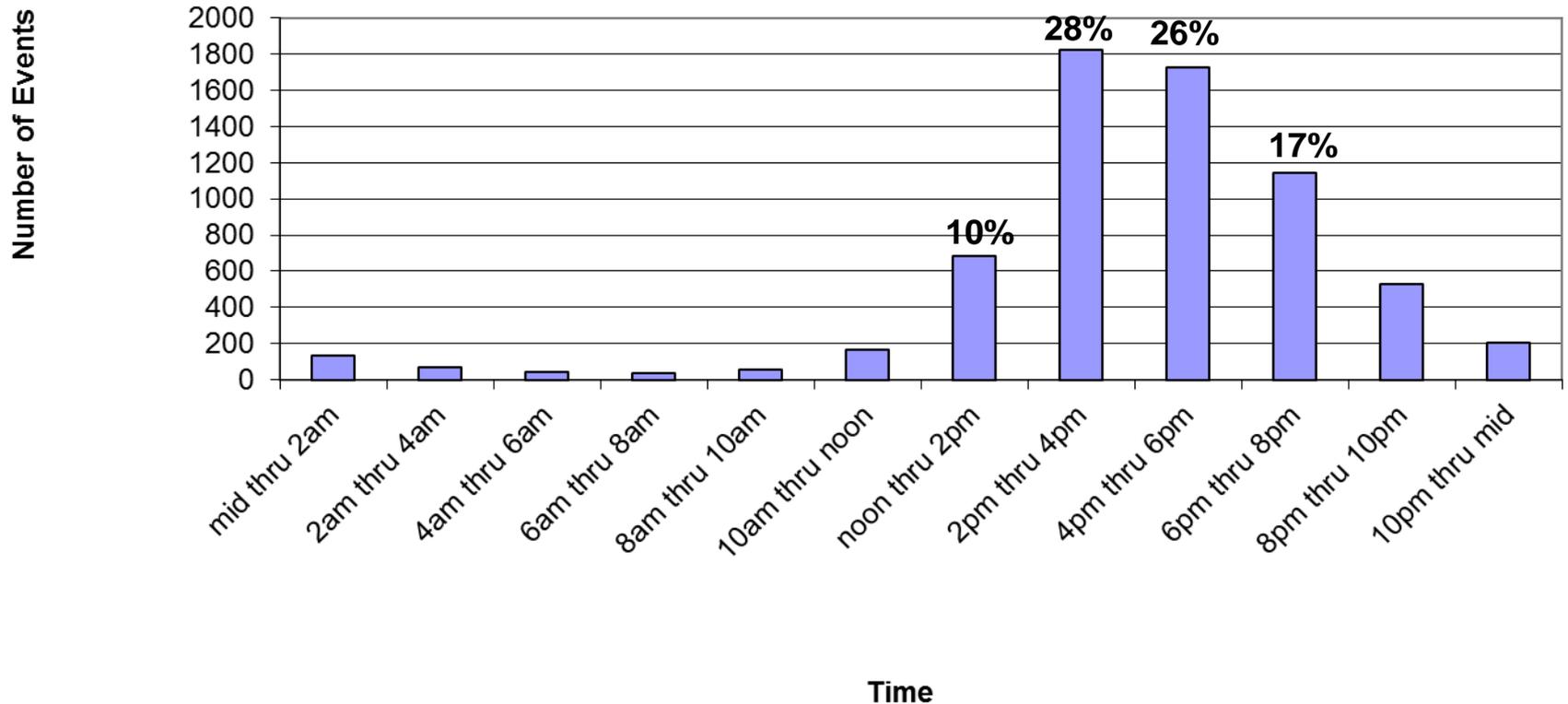
All Severe Weather Reports by Month



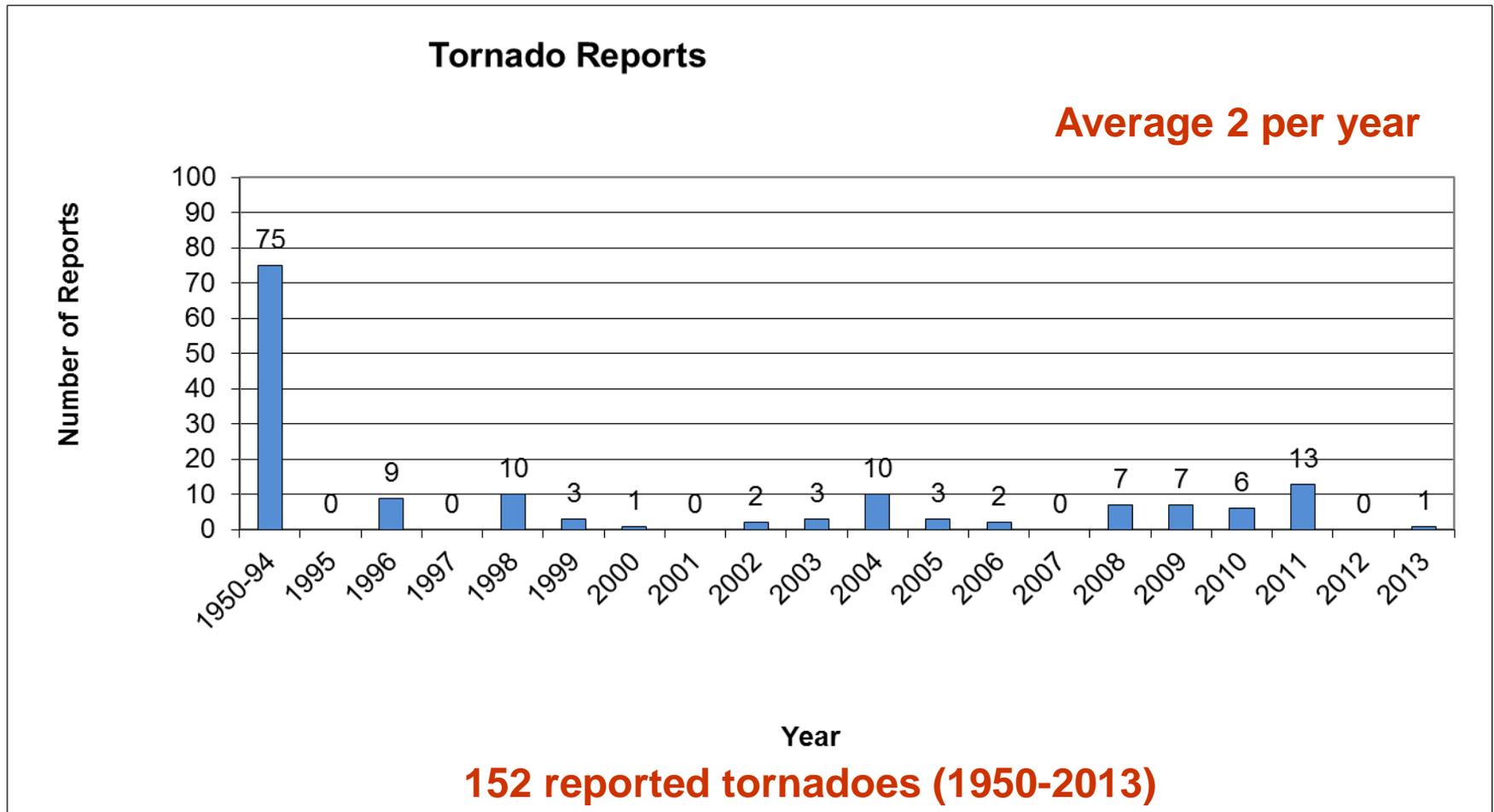
All Severe Weather Reports by Time

All Severe Weather Reports

71% was reported
between 2p-8p

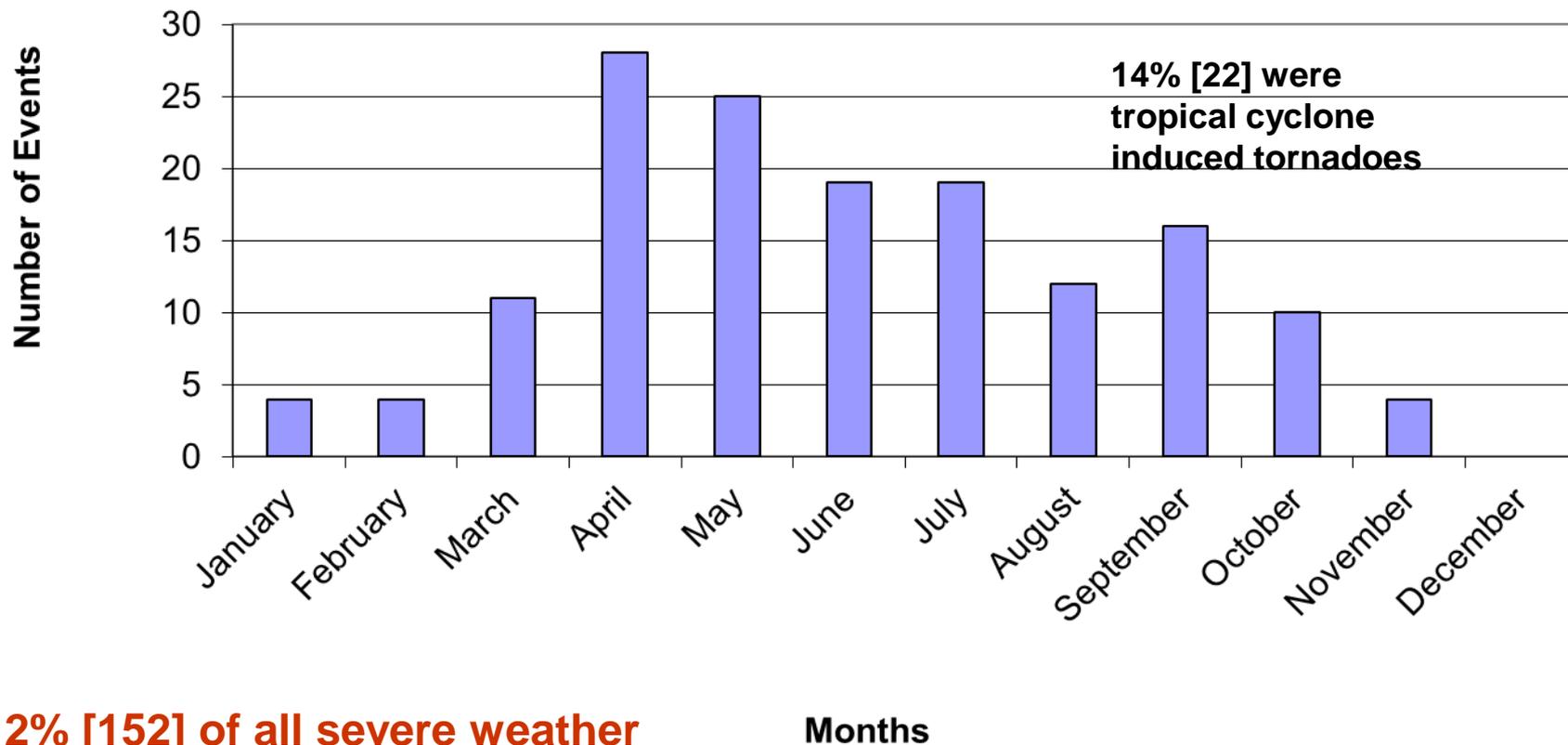


Tornado Reports by Year



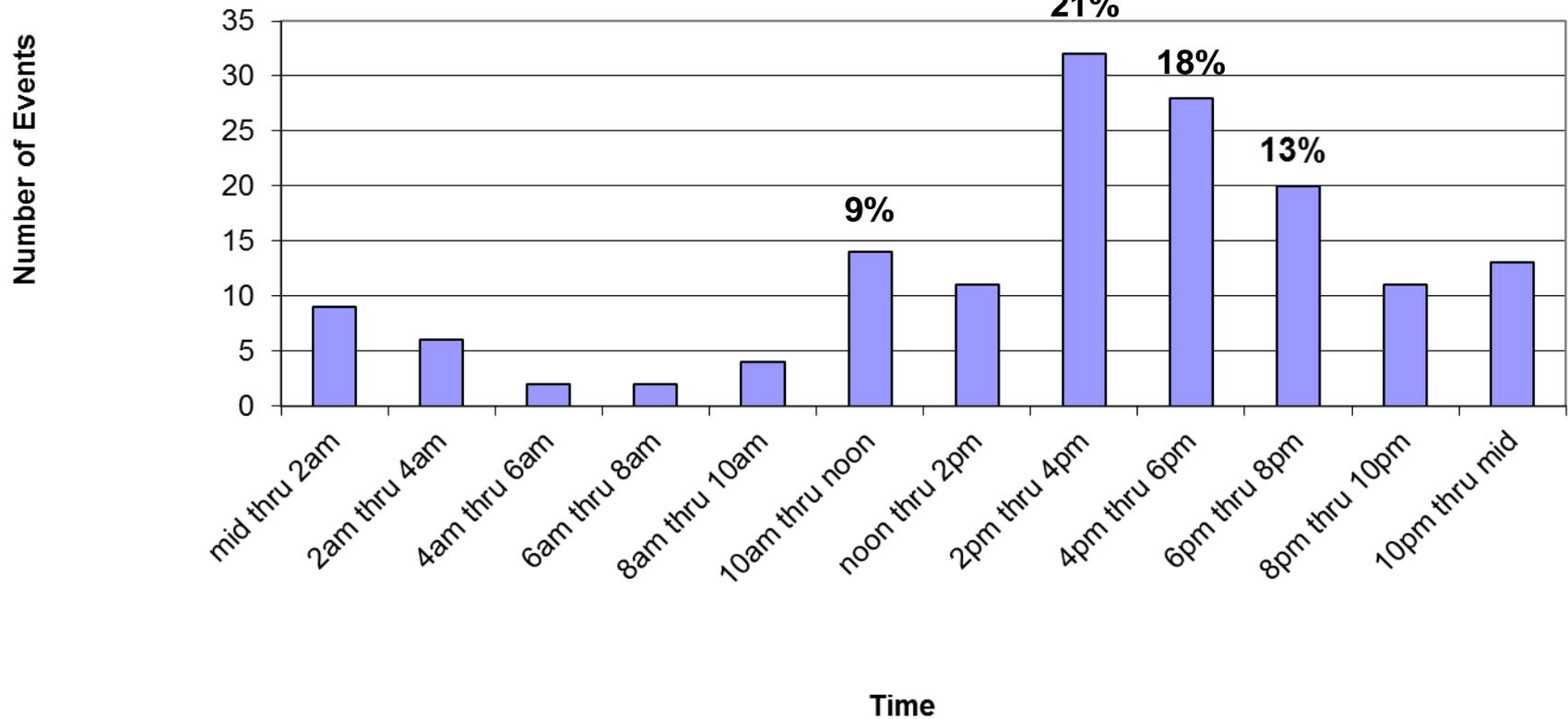
Tornado Reports by Month

Tornado Reports



Tornado Reports by Time

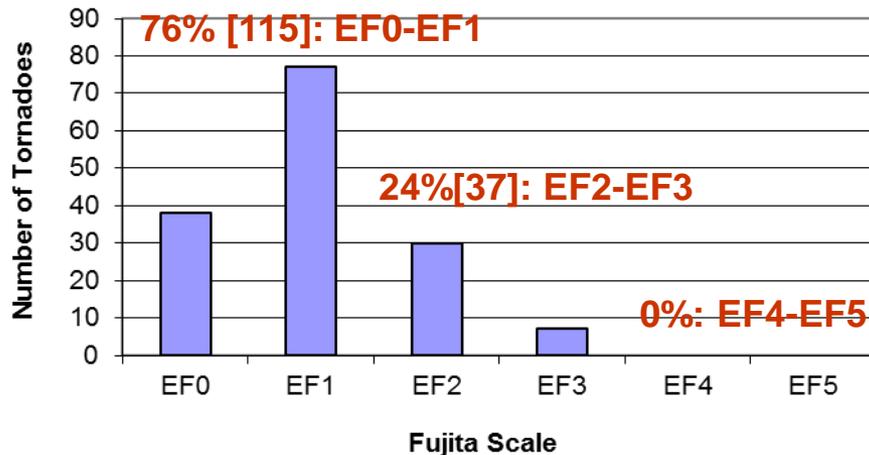
Tornado Reports



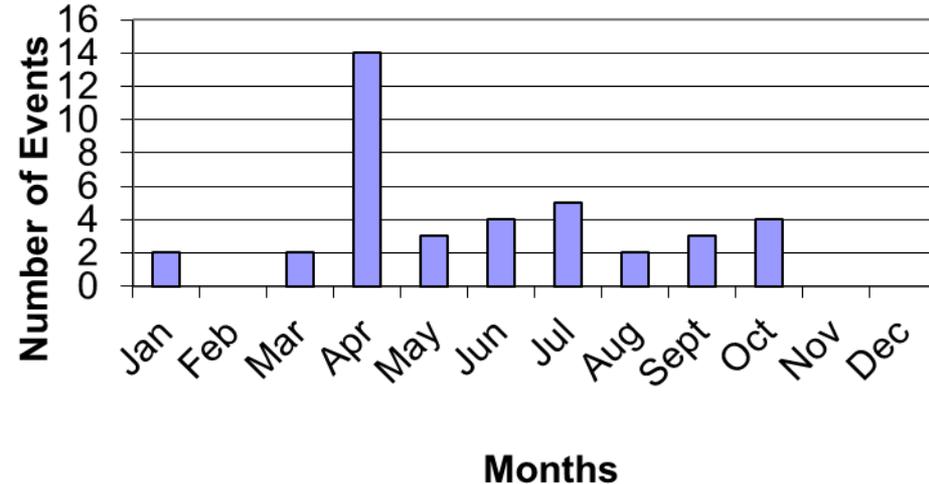
152 reported tornadoes (1950-2013)

Tornado Reports by Magnitude

Tornado Reports by EF Scale



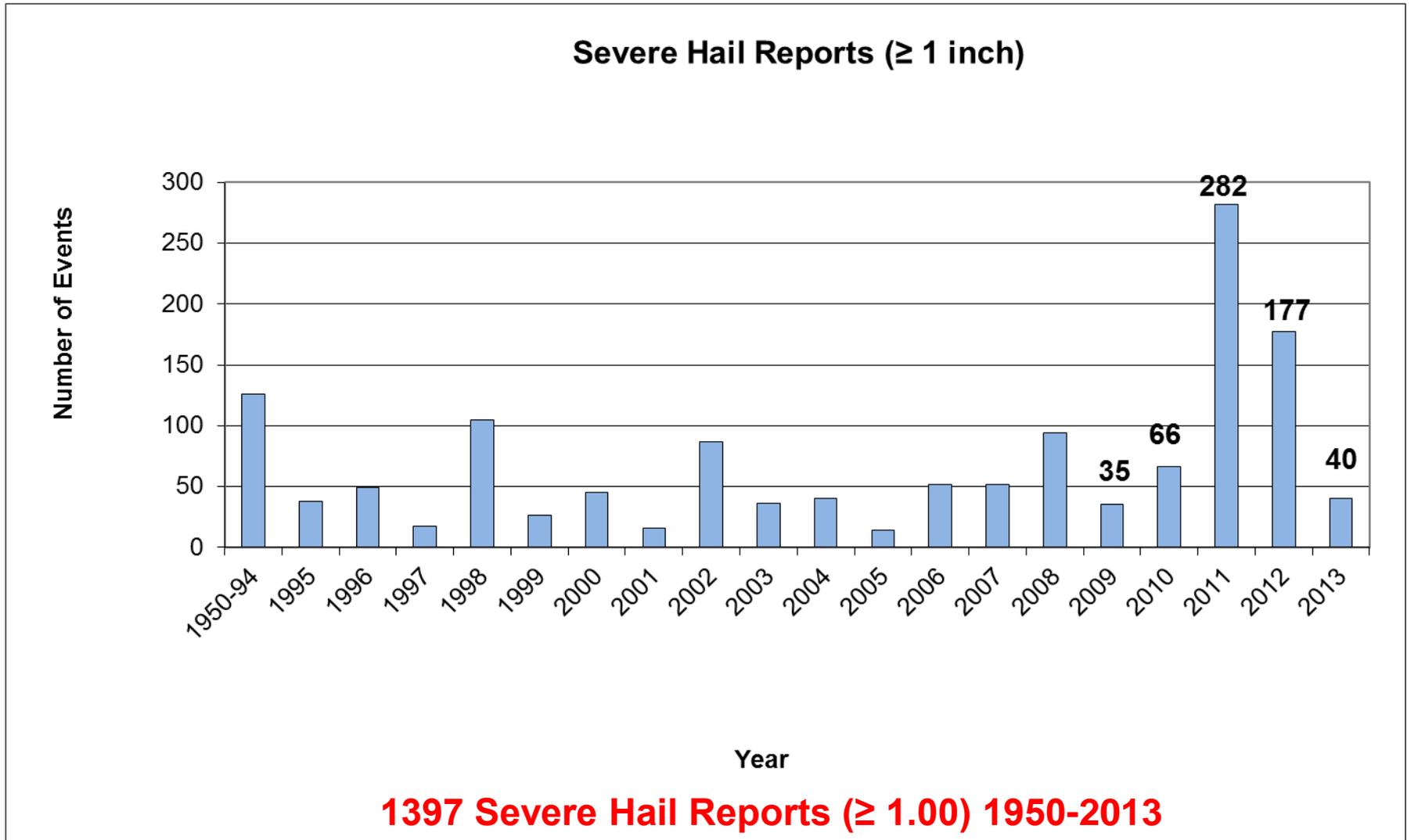
EF2/EF3 Tornado Reports



**28 tornadoes in April,
14 were (EF2-EF3)!**

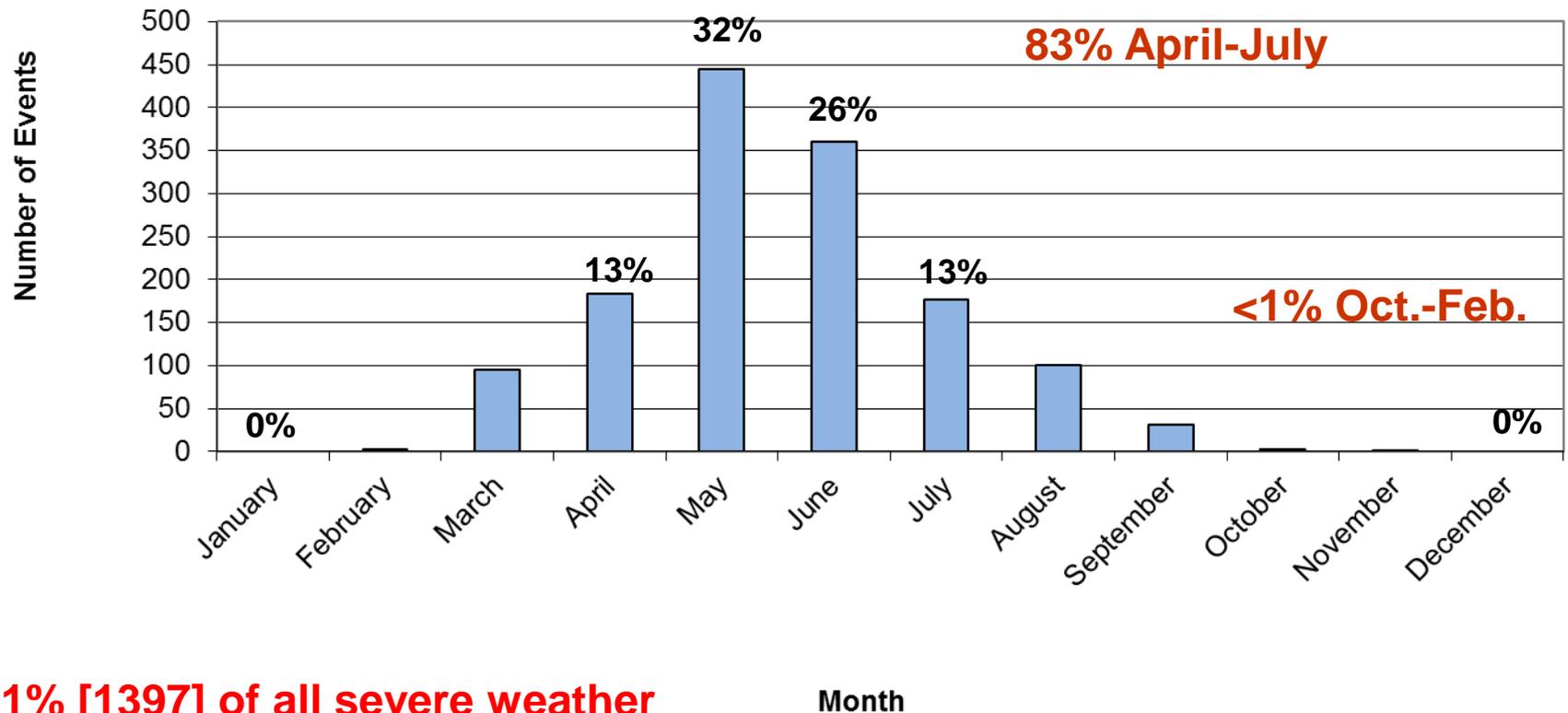
152 reported tornadoes (1950-2013)

Severe Hail Reports by Year



Severe Hail Reports by Month

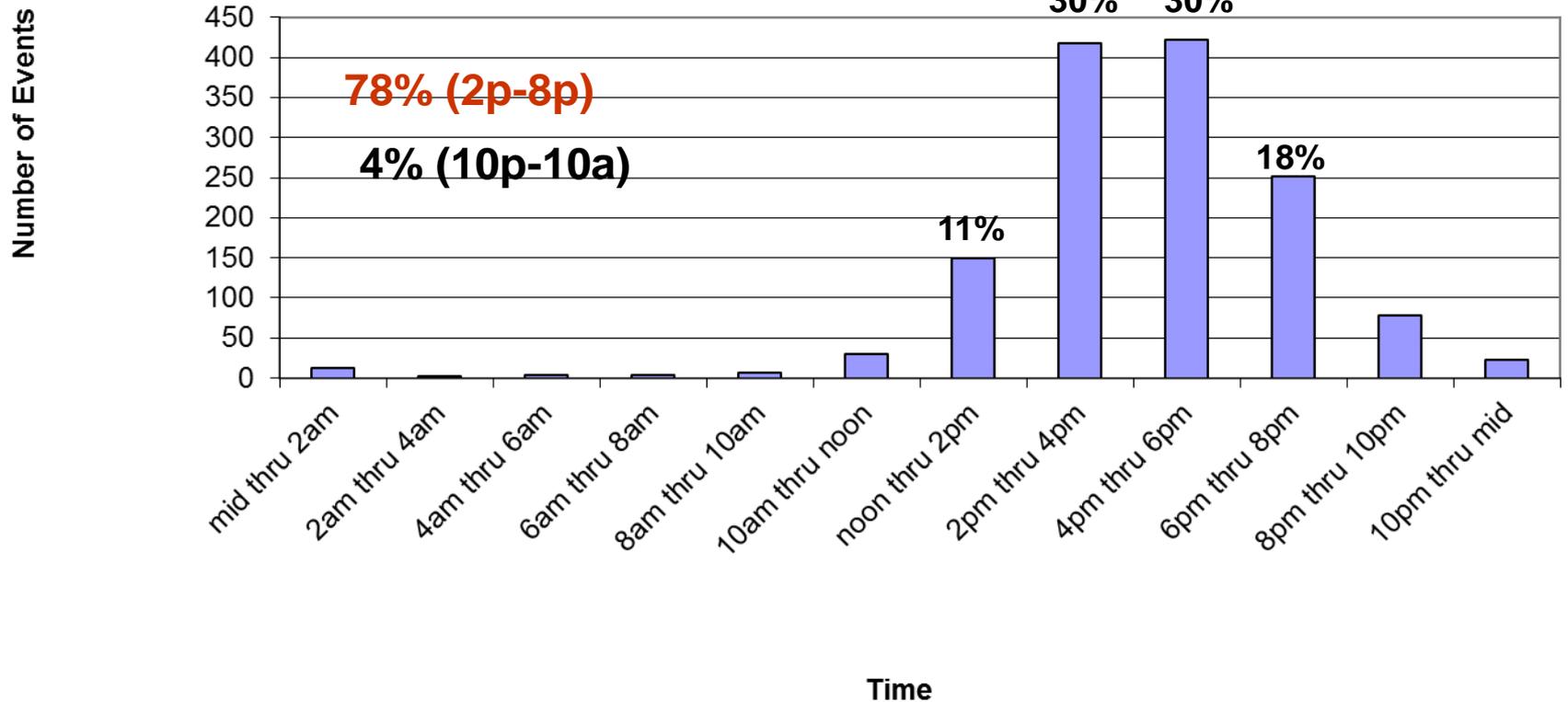
Severe Hail Reports (≥ 1 inch)



21% [1397] of all severe weather reports [6601] are hail ≥ 1.00 inch

Severe Hail Reports by Time

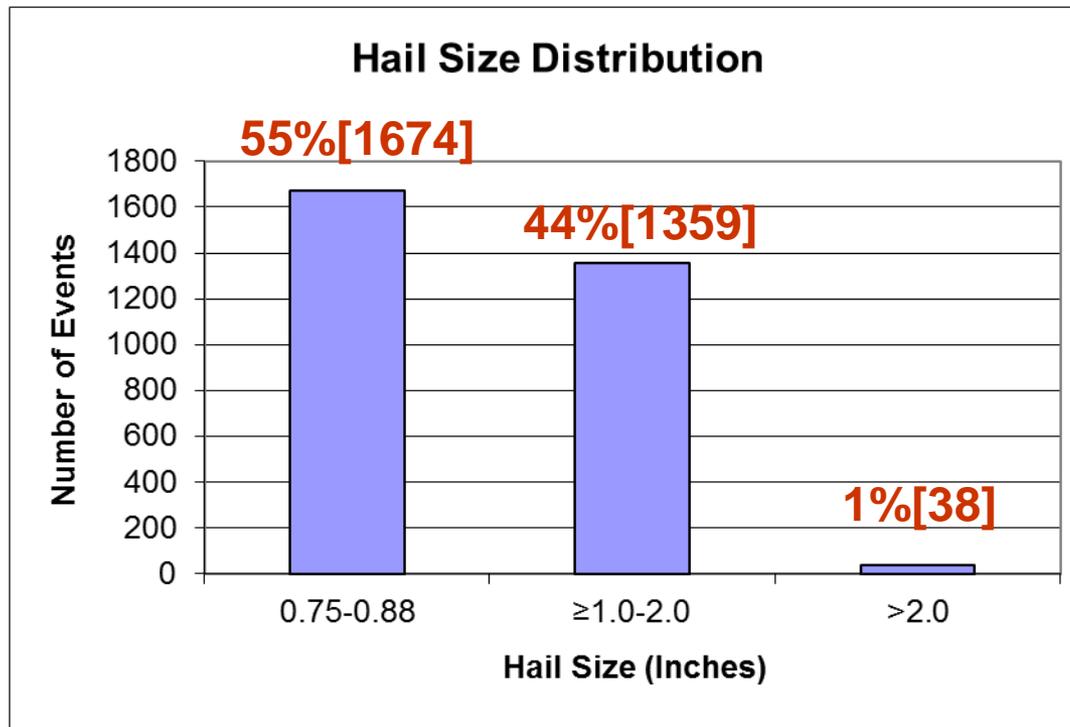
Severe Hail Reports (≥ 1 inch)



1397 Severe Hail Reports (1950-2013)

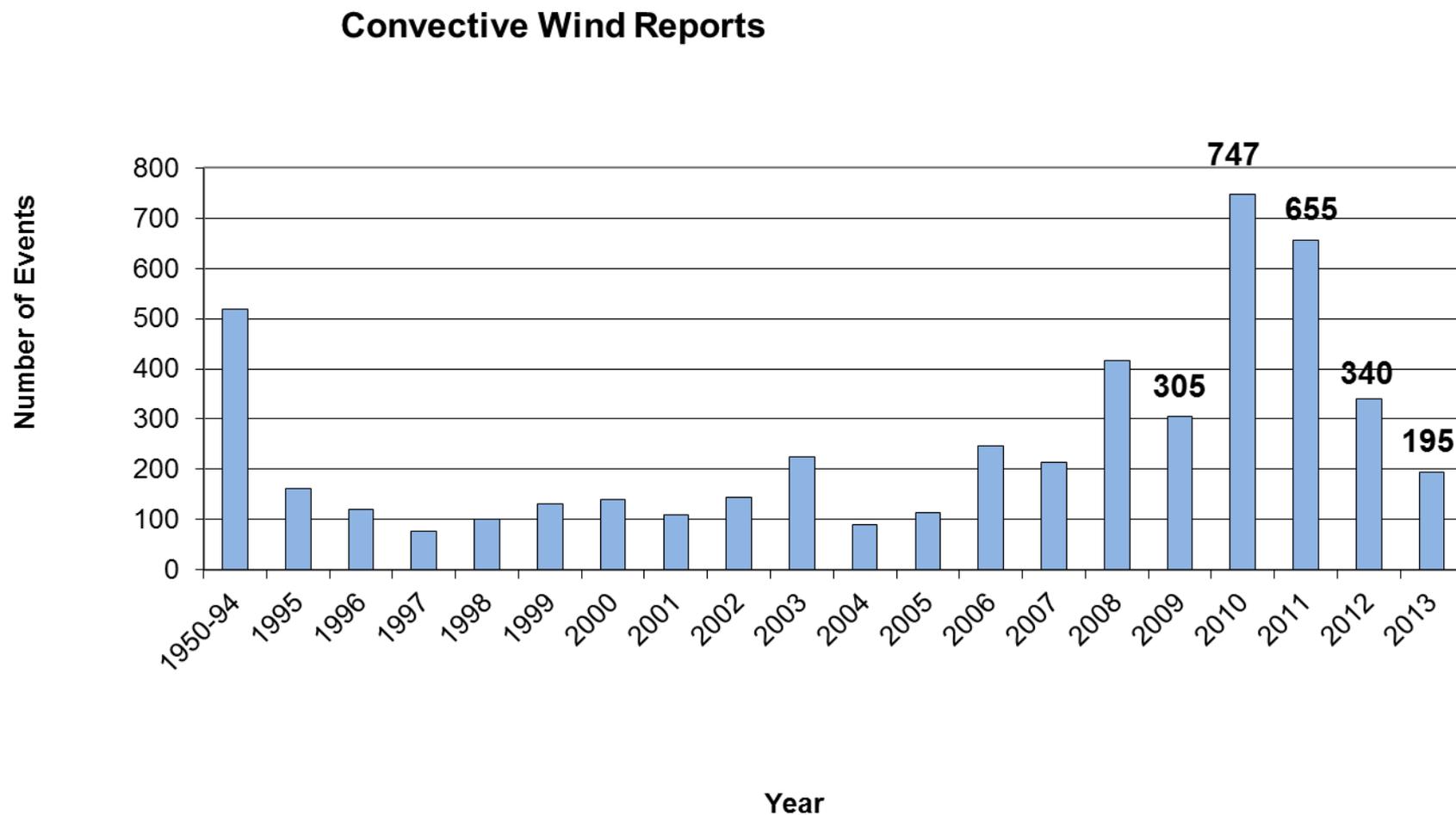
Hail Reports by Magnitude

1397 Severe Hail Reports (1950-2013)



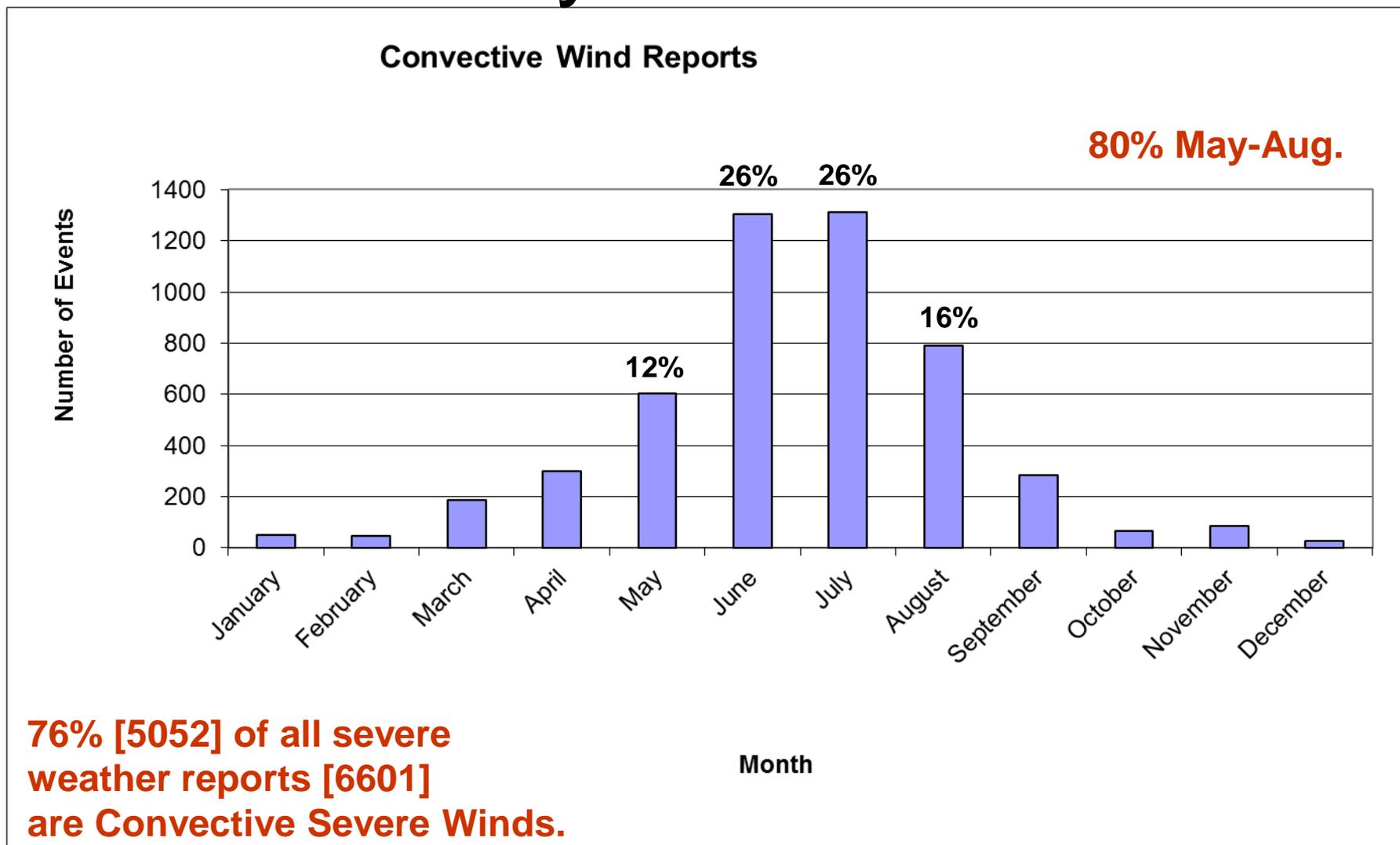
Earliest large hail report: Feb 17 1998 Buckingham County 2.75"
Latest large hail report: Nov 11, 2002 Tazwell County 1.75"
Largest RNK CWA hail report: Boone, NC June 2, 1998 4.00"

Convective Wind Reports by Year

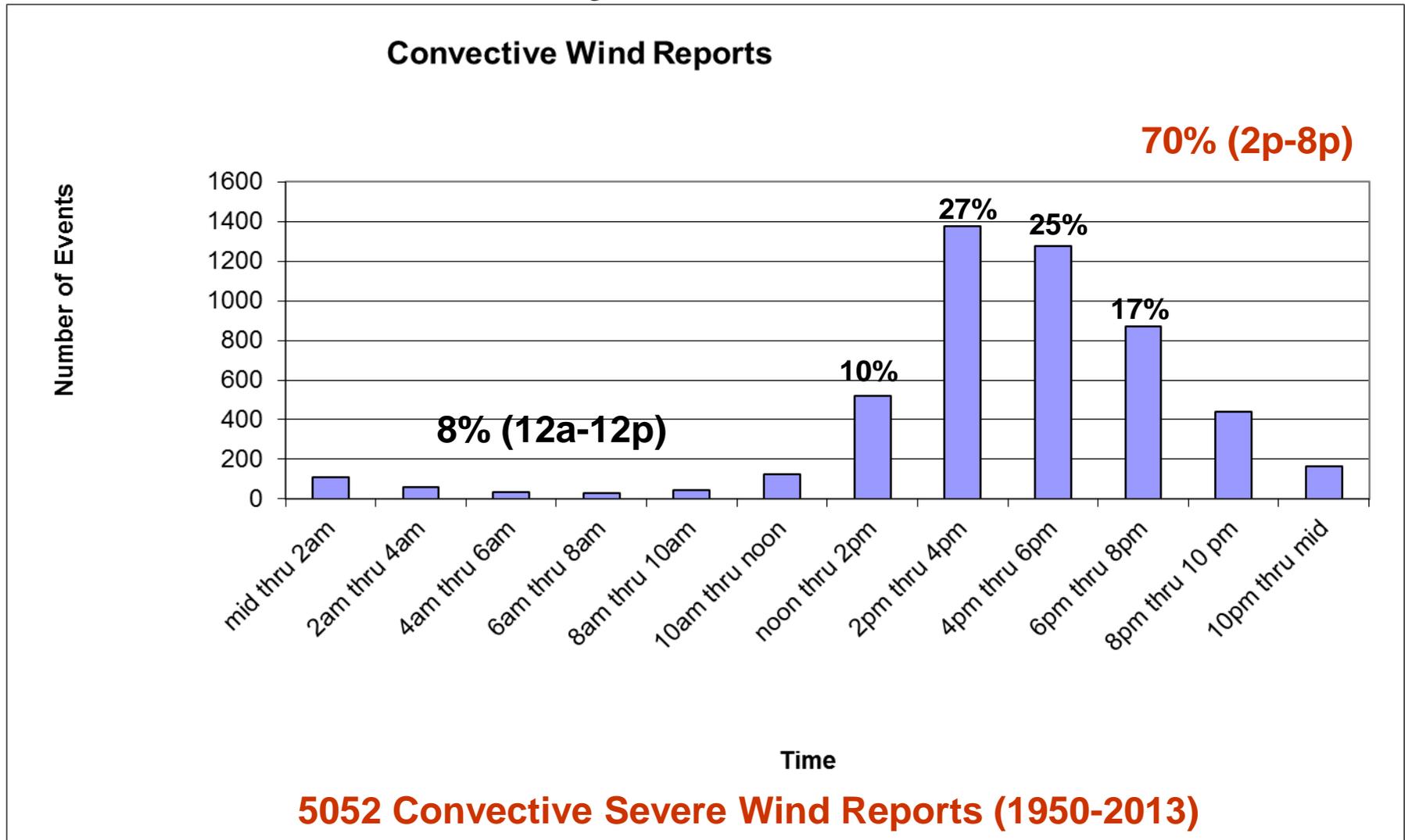


5052 Convective Severe Wind Reports (1950-2013)

Convective Wind Reports by Month



Convective Wind Reports by Time



Highlights

- If a storm does become severe, 76.5% of the reports are from convective winds, 21.1% are from hail, and 2.3% are tornadoes.
- Majority of severe weather reports are from counties with a high population density...particularly counties with independent cities east of the Blue Ridge and the Roanoke and New River Valleys.
- Tornadoes that touch down in the WFO Blacksburg CWA are generally east of the Blue Ridge and near the North Carolina and Virginia border.
- Tornadoes developing within the WFO Blacksburg CWA usually occur between the months of April and July.
- On average, two tornadoes touch down within the WFO Blacksburg CWA per year.
- The majority (60%) of the tornadoes occur between 12:00 pm and 8:00 pm.
- Weak tornadoes account for 76% of all the tornadoes reported.
- Of the strong tornadoes (EF2 or greater), most have occurred during the month of April.
- No violent tornadoes (\geq EF4) have been reported within the CWA.
- 90% of the tropical cyclone-induced tornadoes are weak tornadoes. Ivan spawned two F2 tornadoes (Bedford and Henry County on September 17, 2004).

Highlights Continued

- Severe hail (≥ 1.00 inch) occurs most often between the months of April and July (83%), with a seasonal peak in late May and early June.
- The majority (78%) of severe hail reports occurs between 2:00 pm and 8:00 pm.
- 45% of all hail reports are equal to or greater than 1.00 inch.
- Severe convective winds are most likely to occur between the months of May and August (80%) with a seasonal peak in late June through July.
- The majority (70%) of severe convective winds occur between 2:00 pm and 8:00 pm, with a diurnal peak between 2:00 pm and 6:00 pm.

**SEVERE WEATHER CLIMATOLOGY TECH MEMO
FOR THE RNK (1950-2005):**

http://www.erh.noaa.gov/rnk/Research/Svr_Wx_Climo.pdf

OTHER LOCAL CLIMATE STUDIES:

http://www.weather.gov/climate/local_data.php?wfo=rnk