

# South Carolina Tornado Outbreak 4/13/2020 (Preliminary Report)

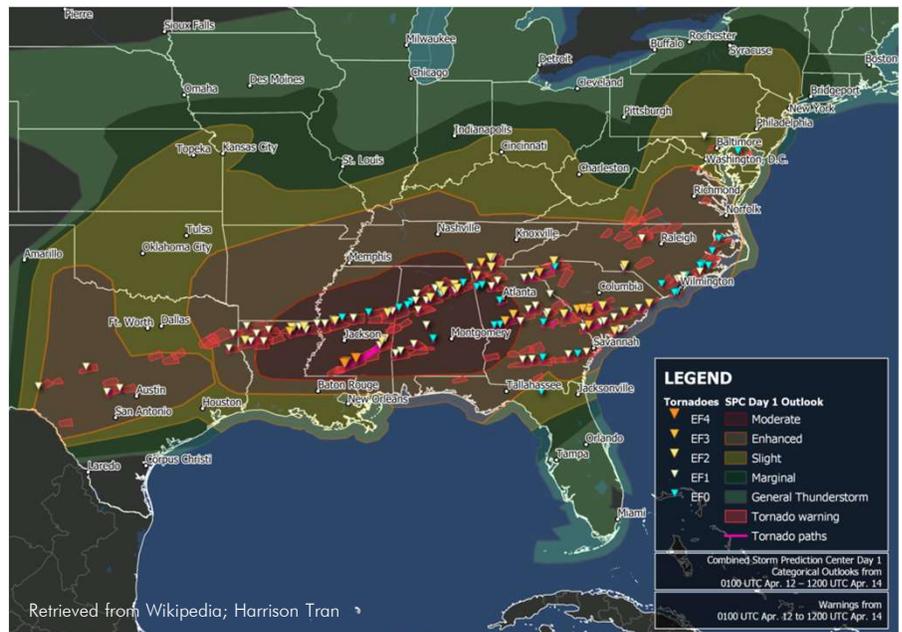
SC State Climatology  
Office



## Synoptic Analysis

The clash of cold, dry air over the Central U.S., with warm, moist over the SE U.S. provided the set-up for a significant tornado outbreak from April 12-13, 2020. The system developed early Saturday (4/11), producing tornadoes and 2-to 4-inch diameter hail across Texas to Nebraska. On Easter Sunday (4/12), the storm system spawned tornadoes across six states, including two powerful EF4. Severe weather continued overnight and into early Monday morning, where it impacted the entire state of SC.

As of this report, there have been 137 confirmed tornadoes across 10 states, with 35 significant tornadoes (EF2+), and a combined length of damage paths over 900 miles.



## Overview of SC's Outbreak

Number of Confirmed Tornadoes	Enhanced Fujita (EF) Rating
2	EF0 (65 – 85 mph)
11	EF1 (86 – 110 mph)
4	EF2 (111 – 135 mph)
7	EF3 (136 – 165 mph)
1	EF4 (166 – 200 mph)

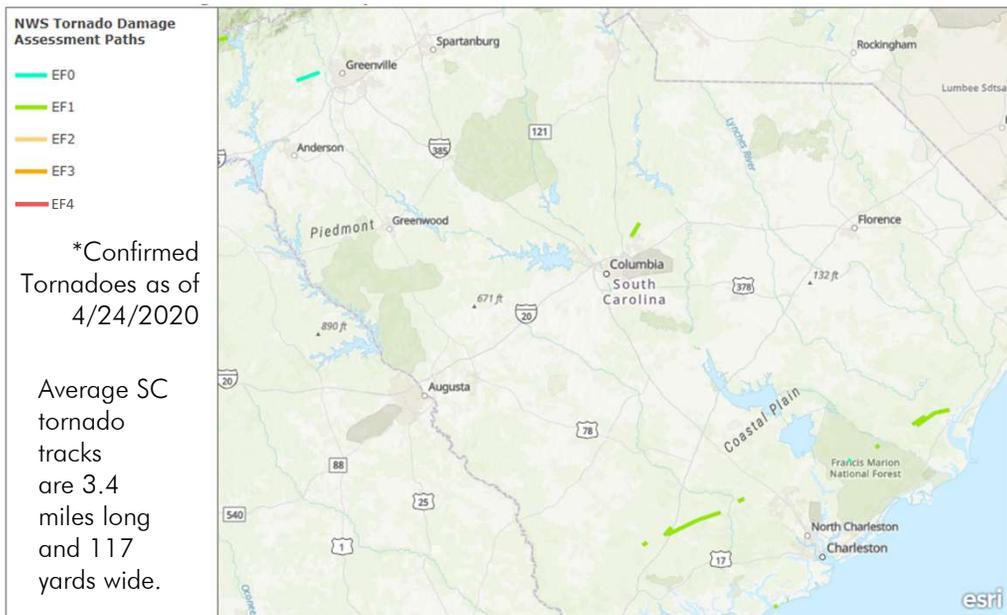
- Most significant (EF2+) tornadoes reported in a single day: 12
- Most EF3 tornadoes reported in a single day: 7
- All of the EF3 tornadoes occurred between 3 – 7 AM EDT.
- Second Deadliest (9 fatalities) Outbreak on record since 1950
  - 15 fatalities on March 24, 1984
- First EF4 in the state since November 1995
- First EF4 on record (since 1950) in the Lowcountry
- First EF3 recorded since April 2009
- First EF3 in the Upstate since March 1994

Report Date: April 24, 2020

For More Information, email: Mizzellh@dnr.sc.gov; GriffinM@dnr.sc.gov; MalsickM@dnr.sc.gov

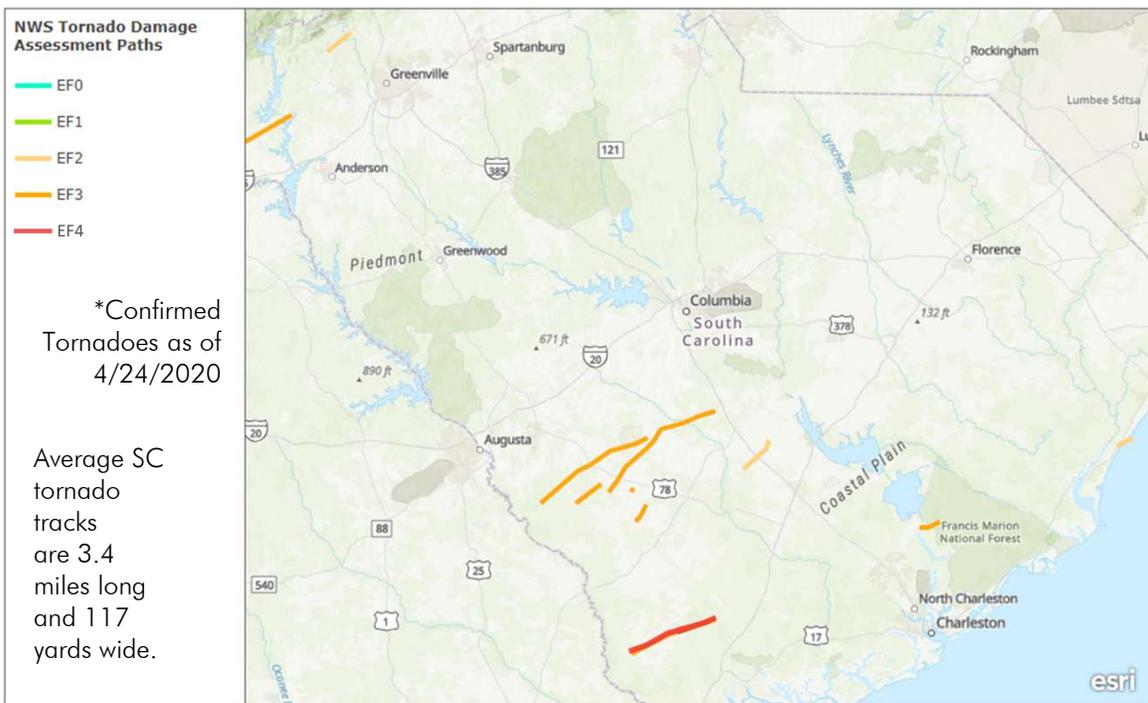
# Confirmed Tornadoes in South Carolina

Counties	EF Rank	Path Length (miles)	Path Width (yards)	Time	Max Wind Speed (mph)	Start Location	End Location
Oconee	EF1	4.03	400	3:18 AM	105	Salem	Salem
Pickens	EF0	7.70	30	3:40 AM	80	Easley	Berea
Richland	EF1	4.91	80	5:53 AM	105	Elgin	Blythewood
Colleton	EF1	1.43	50	6:39 AM	90	Islandton	Hendersonville
Colleton	EF1	3.16	100	6:46 AM	105	Walterboro	Walterboro
Colleton	EF1	8.10	500	6:47 AM	110	Walterboro	Round O
Dorchester	EF1	2.29	150	7:10 AM	102	Givhans	Givhans
Berkeley	EF0	0.93	200	7:51 AM	85	Bethera	Bethera
Berkeley	EF1	2.54	400	8:00 AM	108	Simmonsville	Palmerville
Georgetown	EF1	4.80	40	8:13 AM	90	Sampit	Sampit
Georgetown	EF1	11.20	50	8:15 AM	100	Graves	Graves
Charleston	EF1	1.25	120	8:28 AM	105	Seabrook Is.	Seabrook Is.
Charleston	EF1	0.30	60	8:33 AM	105	Kiawah Is.	Kiawah Is.

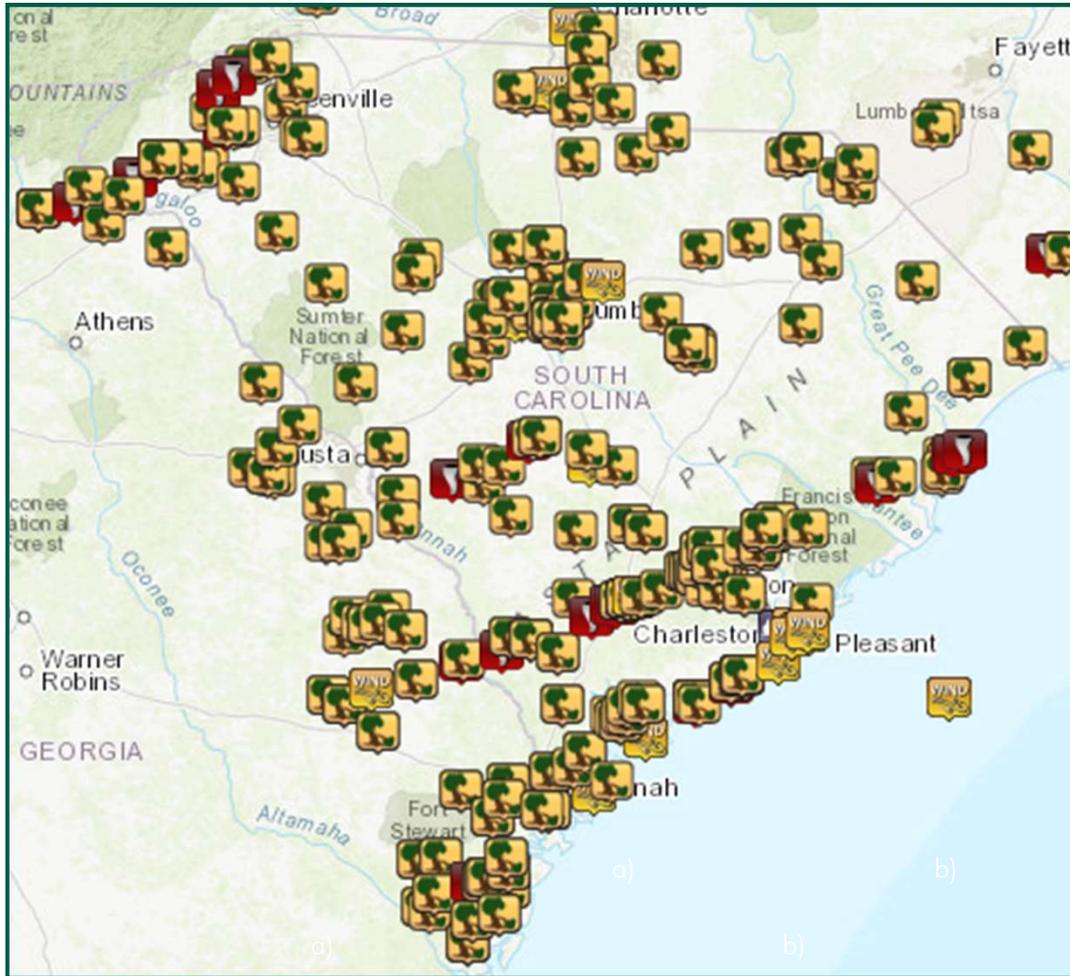


# Confirmed Tornadoes in South Carolina

Counties	EF Rank	Path Length (mi)	Path Width (yards)	Time	Max Wind Speed (mph)	Start Location	End Location
Oconee and Pickens	EF3	16.66	900	3:20 AM	160	Westminster	Central
Pickens, and Greenville	EF2	8.01	200	3:42 AM	120	Pumpkintown	Cleveland
Aiken, Barnwell, and Orangeburg	EF3	33.48	800	5:21 AM	140	Savannah River Site	Springfield
Barnwell	EF3	8.55	50	5:33 AM	138	Snelling	Elko
Barnwell, Orangeburg, and Calhoun	EF3	36.90	770	5:43 AM	140	Elko	St. Matthews
Barnwell	EF3	1.38	40	5:49 AM	140	Blackville	Blackville
Barnwell	EF3	5.45	800	5:50 AM	145	Hilda	Hilda
<b>Hampton</b>	<b>EF4</b>	<b>24.04</b>	<b>1300</b>	<b>6:10 AM</b>	<b>175</b>	<b>Scotia</b>	<b>Fechtig</b>
Orangeburg and Calhoun	EF2	10.29	700	6:25 AM	119	Rowesville	Cameron
Berkeley	EF3	5.81	880	7:38 AM	145	Stony Landing	Old Cordesville
Colleton	EF2	1.16	140	8:15 AM	125	Edisto Beach	Edisto Beach
Georgetown	EF2	4.60	50	8:36 AM	114	N. Litchfield Beach	Murrells Inlet



# National Weather Service Local Storm Reports



Thunderstorm  Tornado  Wind   
Wind Damage 

Over 3,000 wind damage reports in South Carolina  
Highest Reported Wind Gusts (outside of tornadoes)

- Shaw AFB: 66 mph
- Rock Hill/York Co. AP: 64 mph
- Lake Murray RC Winds: 52 mph
- Orangeburg Co. AP: 51 mph
- Murrells Inlet WeatherFlow Station: 114 mph\*\*\*

\*\*\* Associated with EF2 tornado



Issued by SC State Climate Office 4/24/20, and will be updated as needed.  
Detailed Open-File Report available early May.

## Initial Damage Estimate

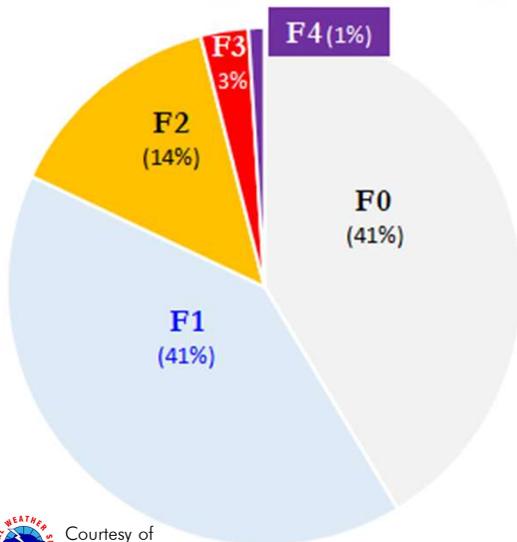
- 1,549 homes affected
  - 182 homes with major damage
  - 209 homes destroyed
- Major damage reported in 14 counties
- Localized damage reported in 17 counties
- Maximum power outages 391,000+ (statewide)



Pictures of EF3 damage from Livingston (a), Seneca (b), and the Savannah River Site (d). An EF4 caused significant damage to the community of Estill (c) in Hampton County.

## Climatological Perspective 1950-2019

All South Carolina Tornadoes, Distributed By (E)F-Scale Intensity



Courtesy of NWS Columbia

Only 4% of tornadoes on record from 1950-2019, were rated at EF3 or higher.  
 ~3% EF3 [28 tornadoes]  
 ~1% EF4 [10 tornadoes]

- Tornado Occurrences by Month:
  - April: 169
  - May: 148
  - September: 137
  - March: 129
- Only 2 EF3+ Tornadoes have ever occurred between midnight and 8 AM LST (8 occurred during April 13 event)



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## South Carolina Tornado Extremes (since 1950)

Most tornadoes in an outbreak:

46 tornadoes on September 6-7, 2004 (Hurricane Frances)

Longest tornado track\*:

62 miles (McCormick-Edgefield-Saluda) on November 22, 1992 (F3)

Widest tornado\*:

2600 yards in Marlboro County on March 28, 1984

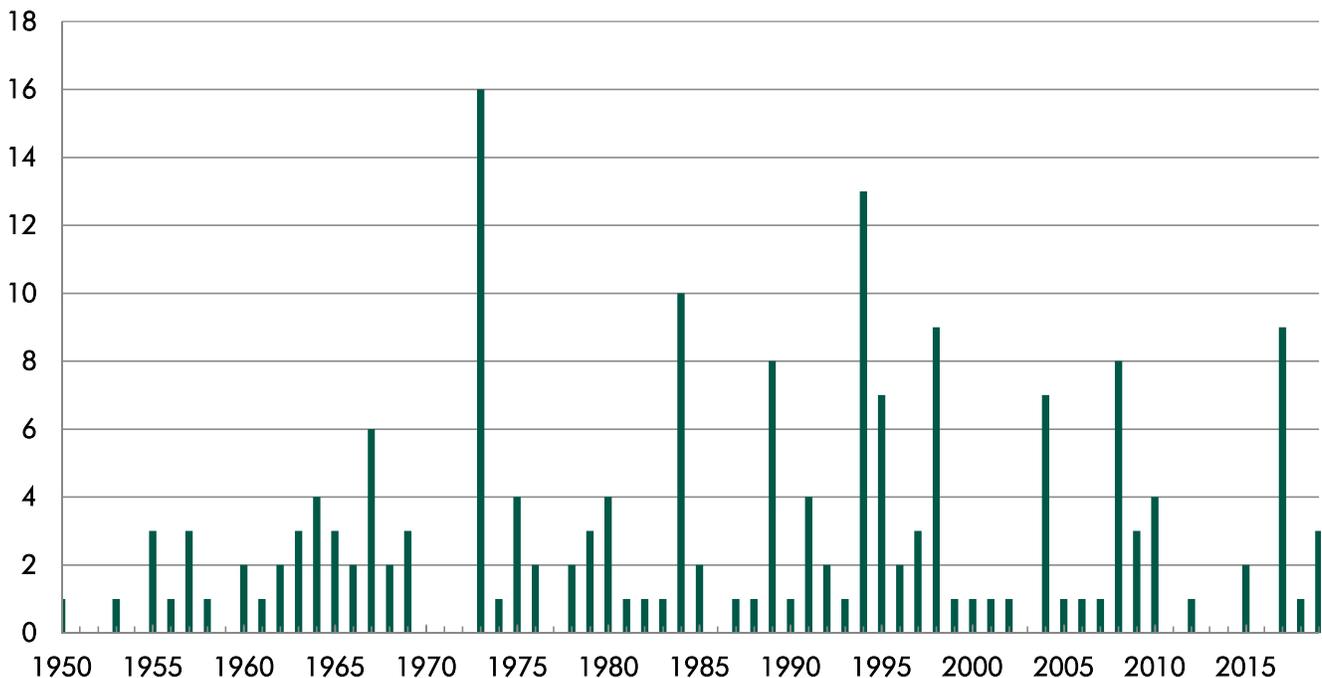
\*Average SC tornado tracks are 3.4 miles long and 117 yards wide.

### Greatest Number of Tornadoes (by Outbreak Since 1950)

	#	EF0	EF1	EF2	EF3	EF4
9/7/2004	46	24	14	3	1	0
3/15/2008	32	12	15	3	2	0
11/7/1995	28	14	8	4	0	1
4/13/2020	25	2	11	4	7	1
8/16/1994	23	8	7	5	3	0

The deadliest tornado in South Carolina history is The Horrell Hill Tornado on April 30, 1924, with 77 fatalities.

## Number of EF2, EF3, and EF4 Tornadoes per Year (1950-2019)



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