

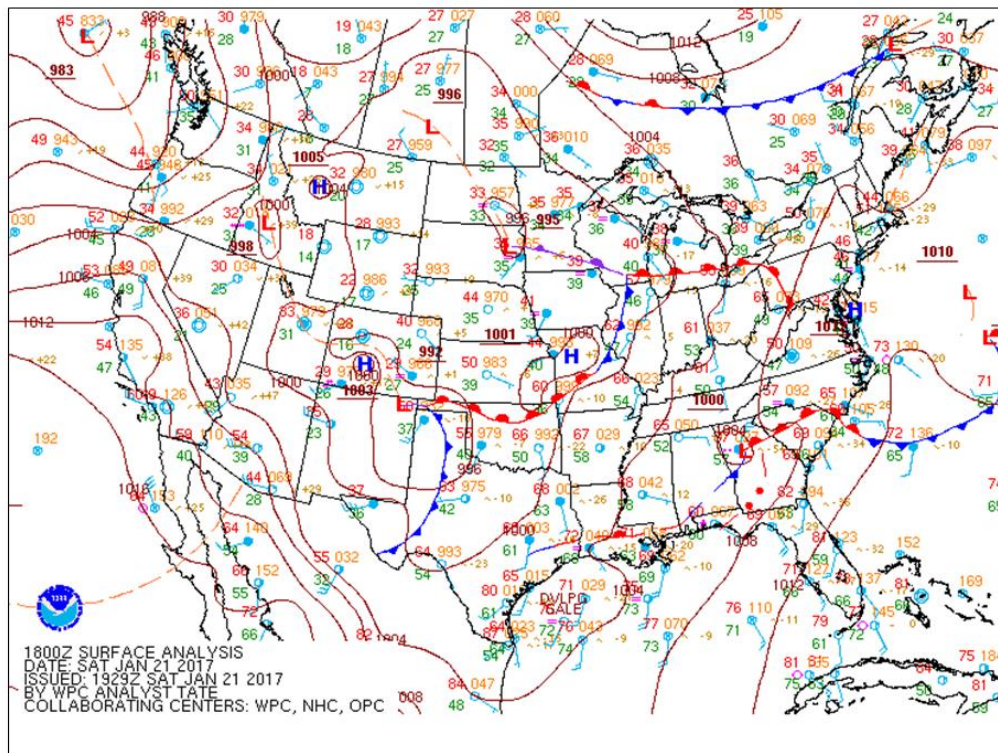
# January 21-22, 2017 Tornadoes

## OVERVIEW

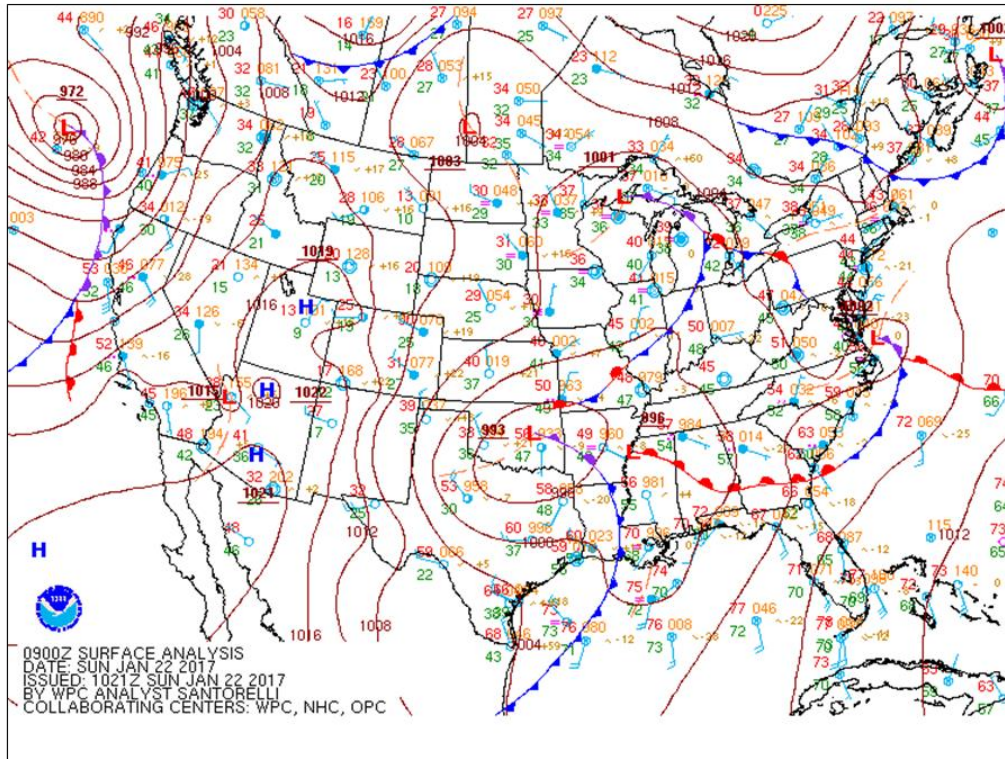
An organized system of thunderstorms known as a Quasi-Linear Convective System (QLCS) developed inland and advanced through the forecast area, prompting a Tornado Watch for most counties. Within an unstable/buoyant environment featuring strong winds and wind shear, this thunderstorm complex produced scattered reports of straight line wind damage and several supercells (i.e., rotating thunderstorms) during the afternoon of Saturday, January 21. A National Weather Service survey team determined that 3 tornadoes briefly touched down during the afternoon of January 21: 2 of EF-0 intensity (one in Tattnall County, Georgia and one in Screven County, Georgia) and 1 of EF-1 intensity in Screven County, Georgia.

During the early morning hours of Sunday, January 22, another round of thunderstorms advanced through southeast Georgia. One of these thunderstorms produced a brief EF-1 tornado at Fort Stewart in northern Liberty County, Georgia. Other thunderstorms produced a wind gust to 64 mph at Fort Stewart and knocked down a couple of trees in Chatham County, Georgia.

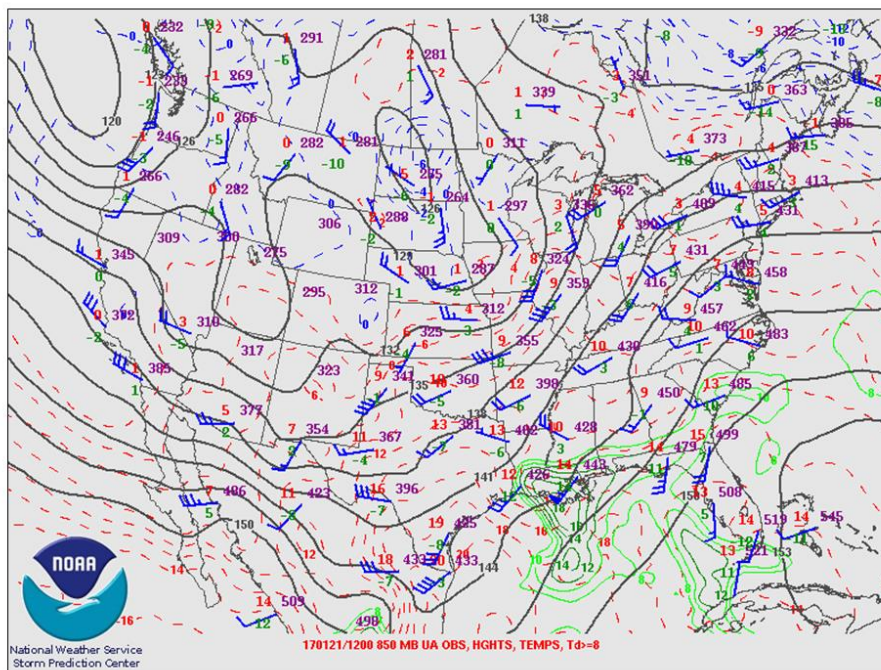
## METEOROLOGICAL REVIEW



*Weather Prediction Center surface analysis for Saturday, January 21 at 18Z (1 pm EST) depicting an area of low pressure over northeast GA and a warm front extending northeast toward the SC/NC border.*

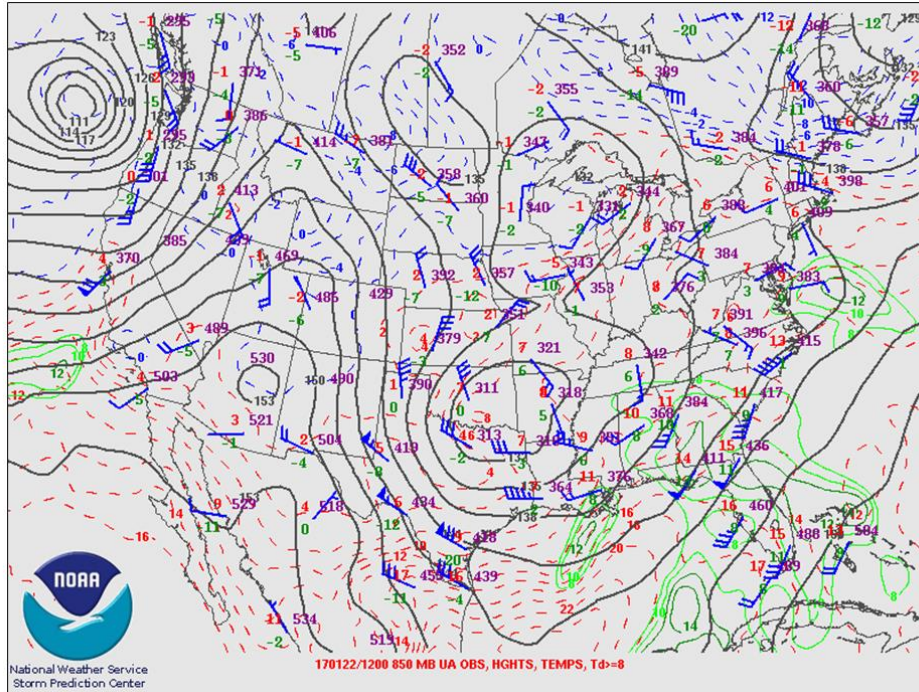


*Weather Prediction Center surface analysis for Sunday, January 22 at 09Z (4 am EST) depicting a warm front over southeast Georgia.*

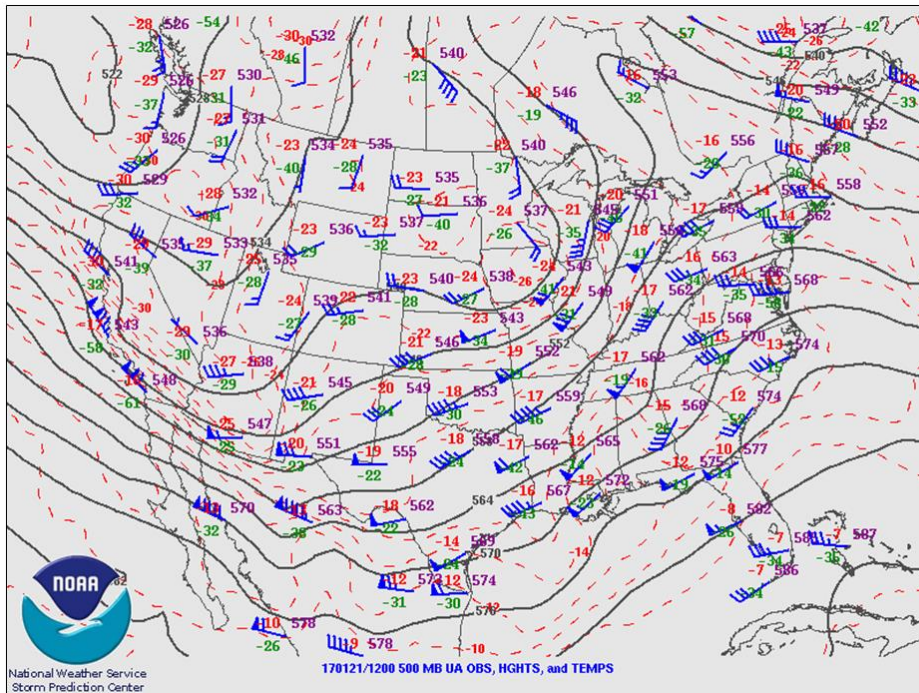


*850 mb analysis on Saturday, January 21 at 12 UTC (7 am EST) depicting a broad trough of low pressure over the southern Plains and a south/southwest flow of warm, moist air across the Southeast U.S.*

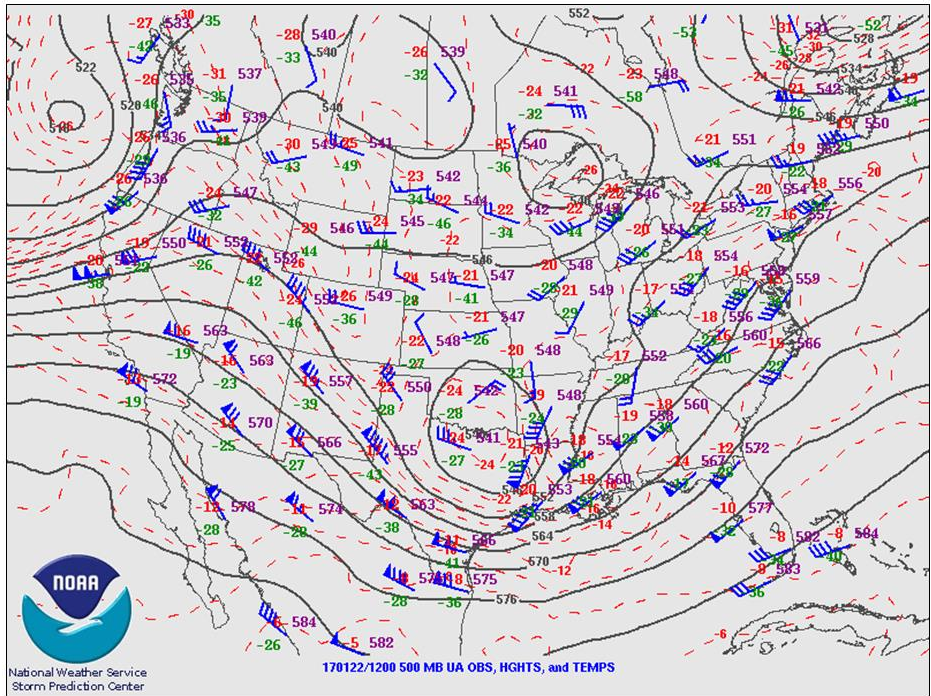




*850 mb analysis on Sunday, January 22 at 12 UTC (7 am EST) depicting low pressure approaching the lower Mississippi River Valley and strengthening southwest winds pushing warm, moist air into the Southeast U.S.*



*500 mb analysis on Saturday, January 21 at 12 UTC (7 am EST) depicting a complex upper trough developing west of our region.*

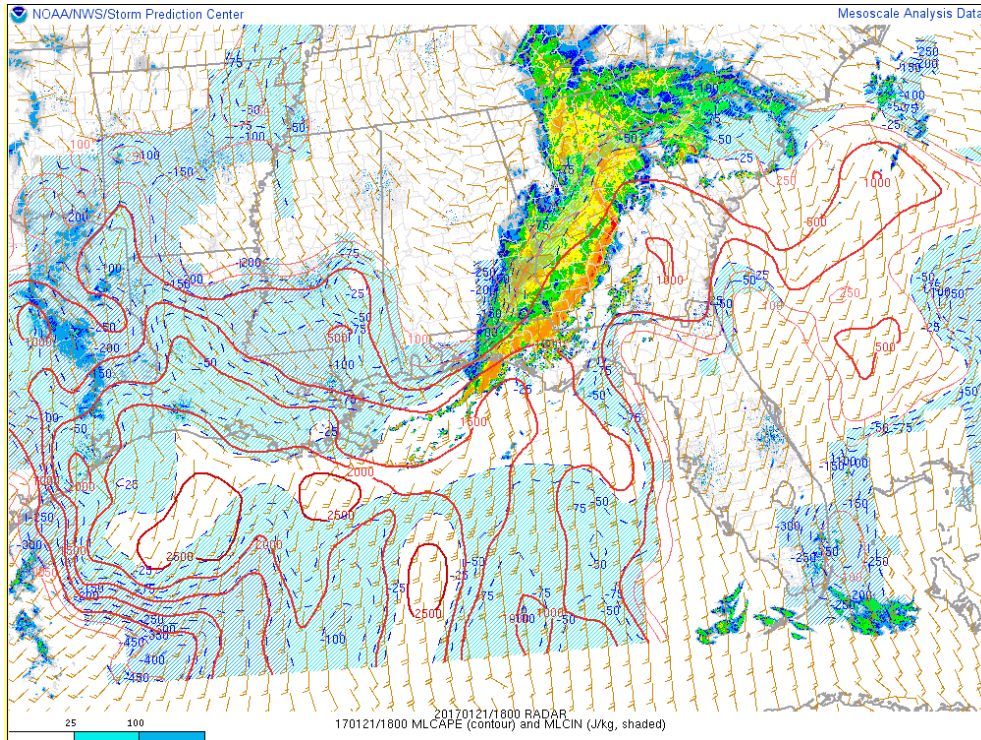


500 mb analysis on Sunday, January 22 at 12 UTC (7 am EST) depicting a deepening upper low west of our region. This type of system has caused many severe weather outbreaks.

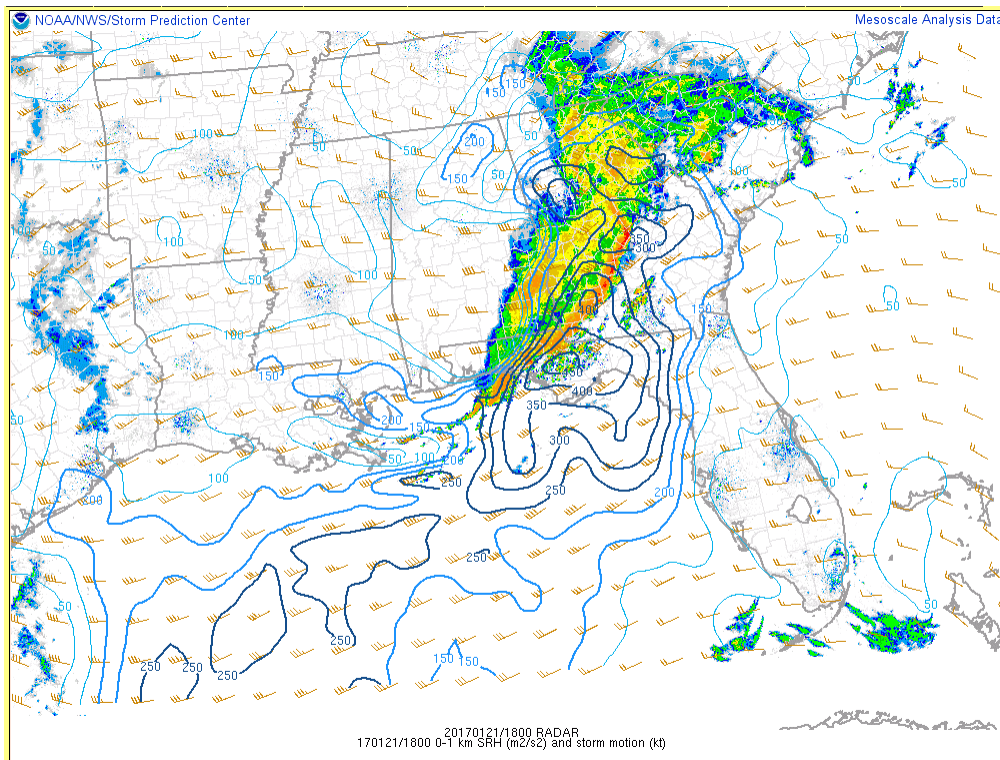


Day 1 Severe Weather Outlook issued by the Storm Prediction Center during the late morning on January 21.

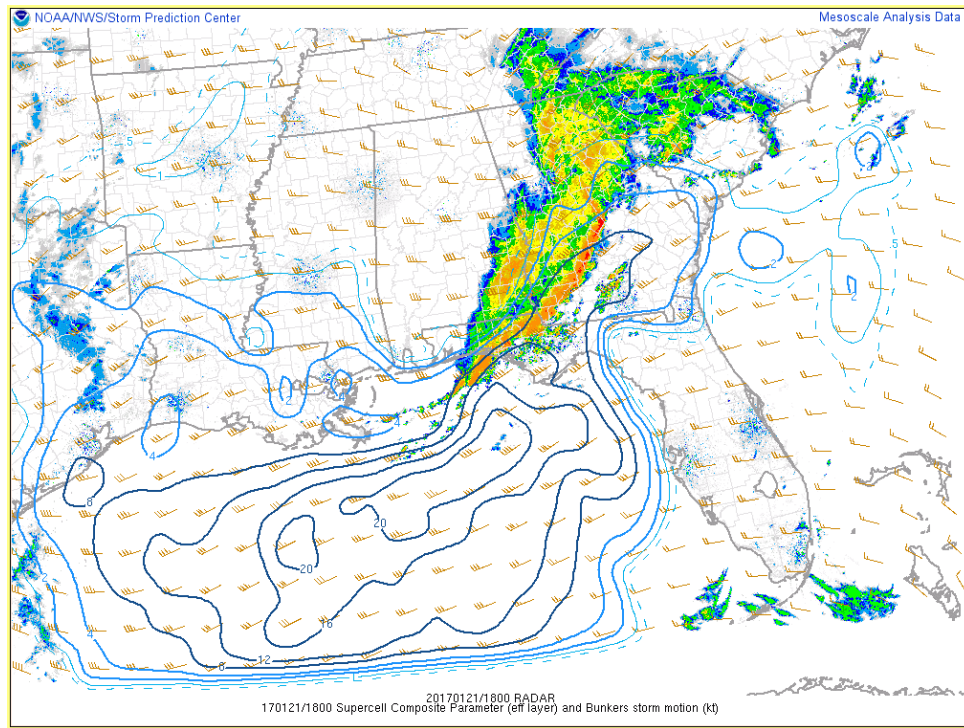




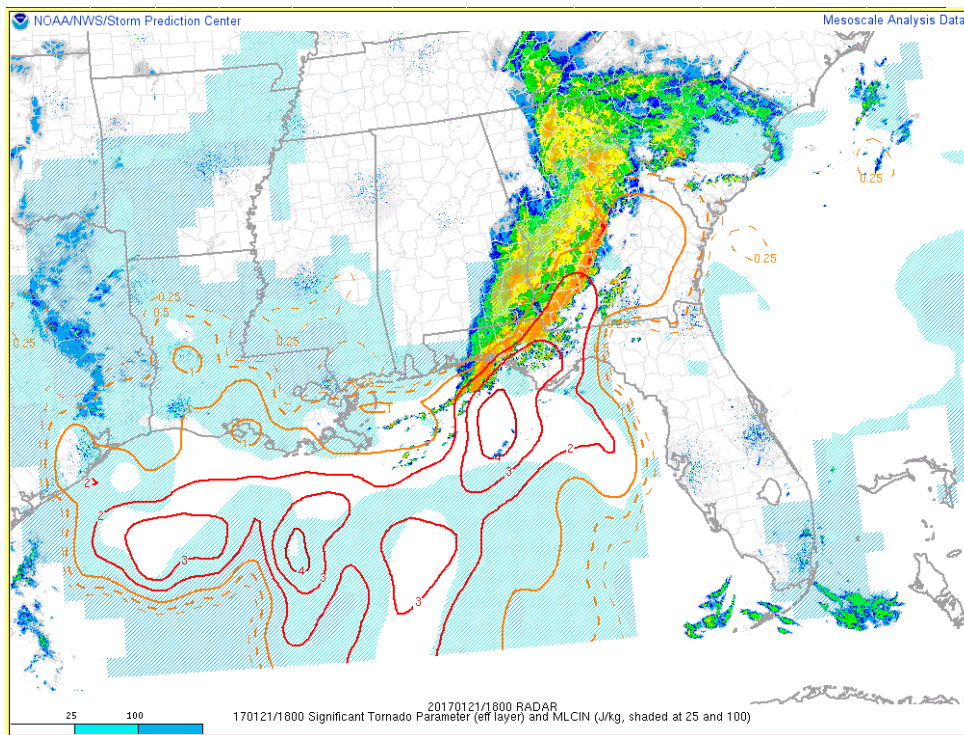
*SPC mesoanalysis at 1 pm EST on January 21 showing mixed-layer CAPE which depicts an unstable/buoyant environment in advance of the approaching QLCS.*



*SPC mesoanalysis at 1 pm EST on January 21 showing the 0-1 km Storm-relative Helicity (SRH) depicting enhanced values ahead of the thunderstorm complex. Helicity indicates the potential for thunderstorm rotation.*

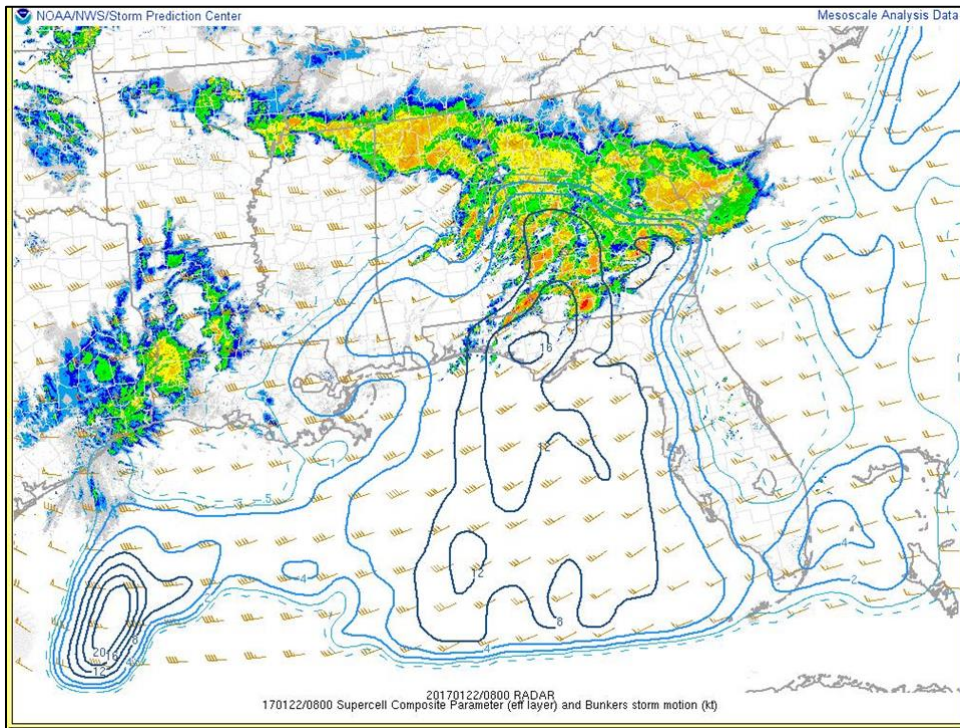


*SPC mesoanalysis at 1 pm EST on January 21 showing the Supercell Composite Parameter depicting enhanced values ahead of the QLCS across southeast GA, suggesting a risk for rotating thunderstorms and tornadoes.*

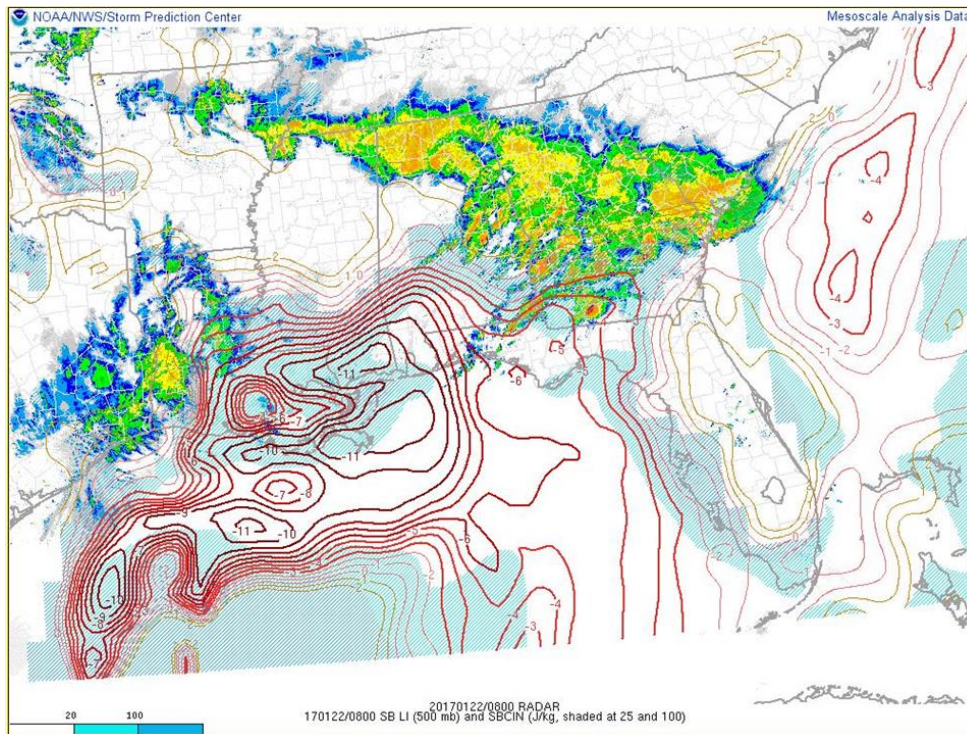


*SPC mesoanalysis at 1 pm EST on January 21 showing the Significant Tornado Parameter which indicates higher values ahead of the QLCS extending into southeast GA. This parameter indicates the potential for significant tornadoes.*

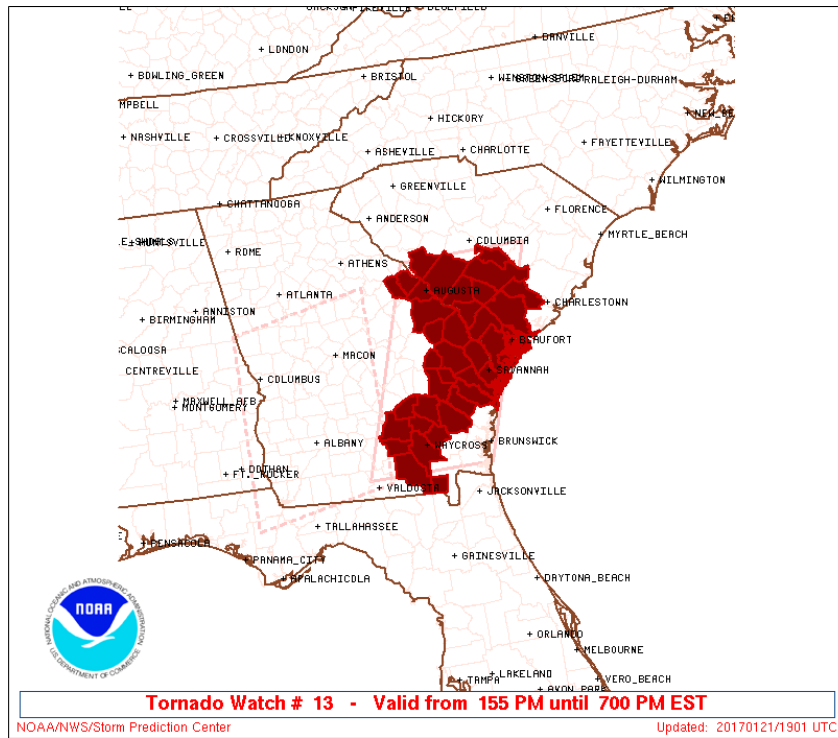




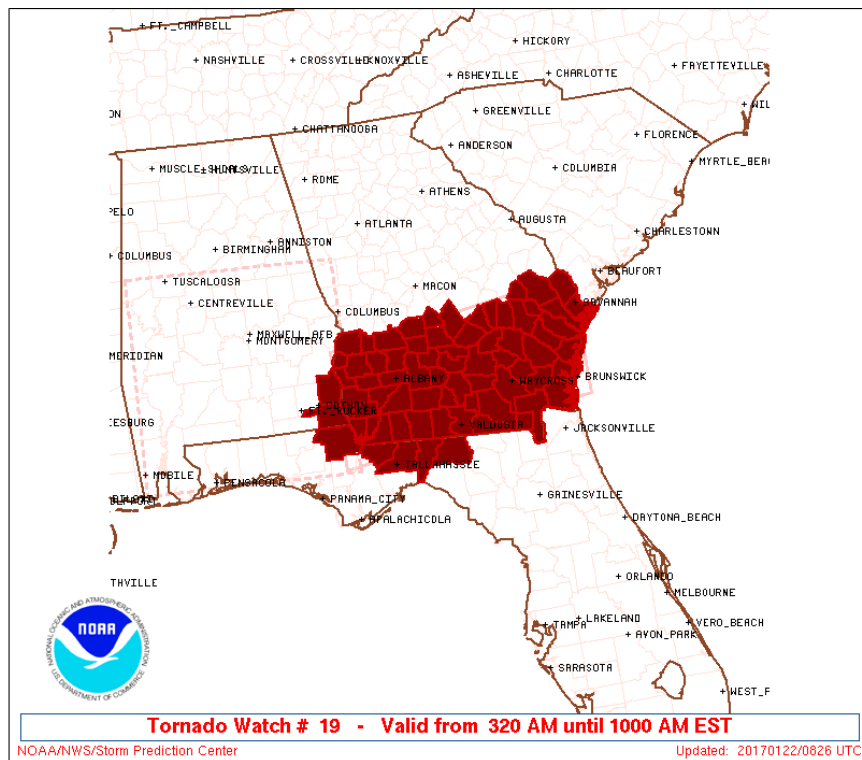
*SPC mesoanalysis showing the Supercell Composite Parameter about 90 minutes before the Liberty County, GA EF-1 tornado indicating the potential for rotating thunderstorms.*



*SPC mesoanalysis at 3 am EST on January 22 showing surface-based instability. At this time, limited instability/buoyancy was occurring across southeast GA.*

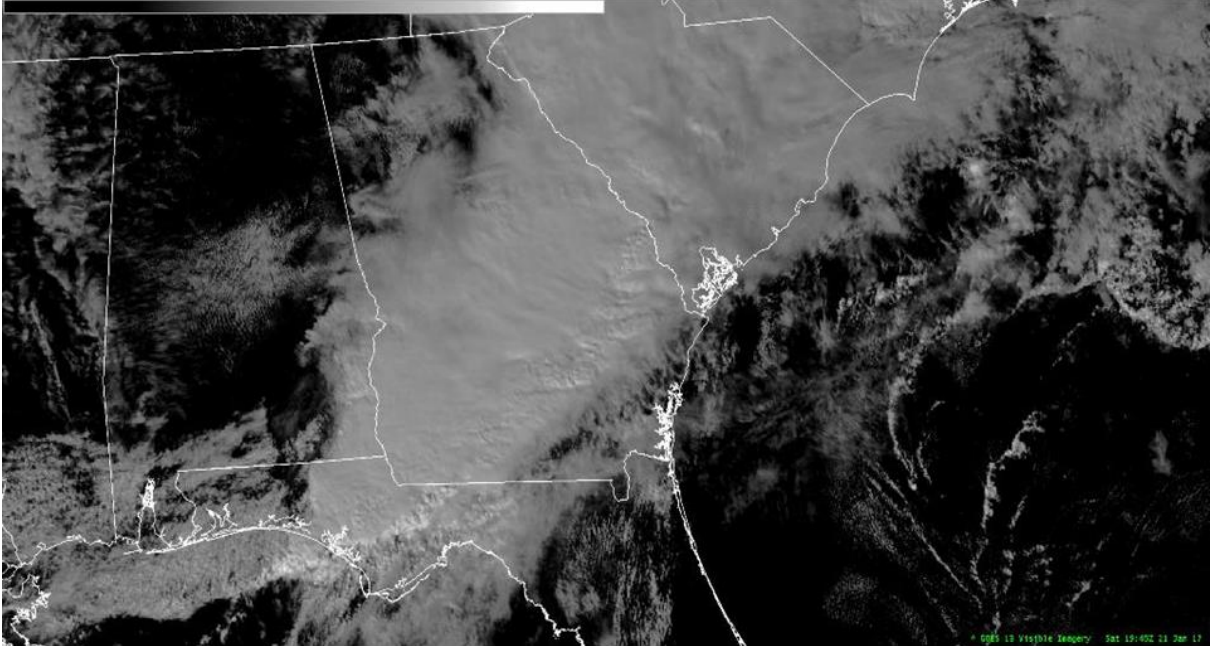


Area under SPC's Tornado Watch #13 issued in the afternoon on January 21.

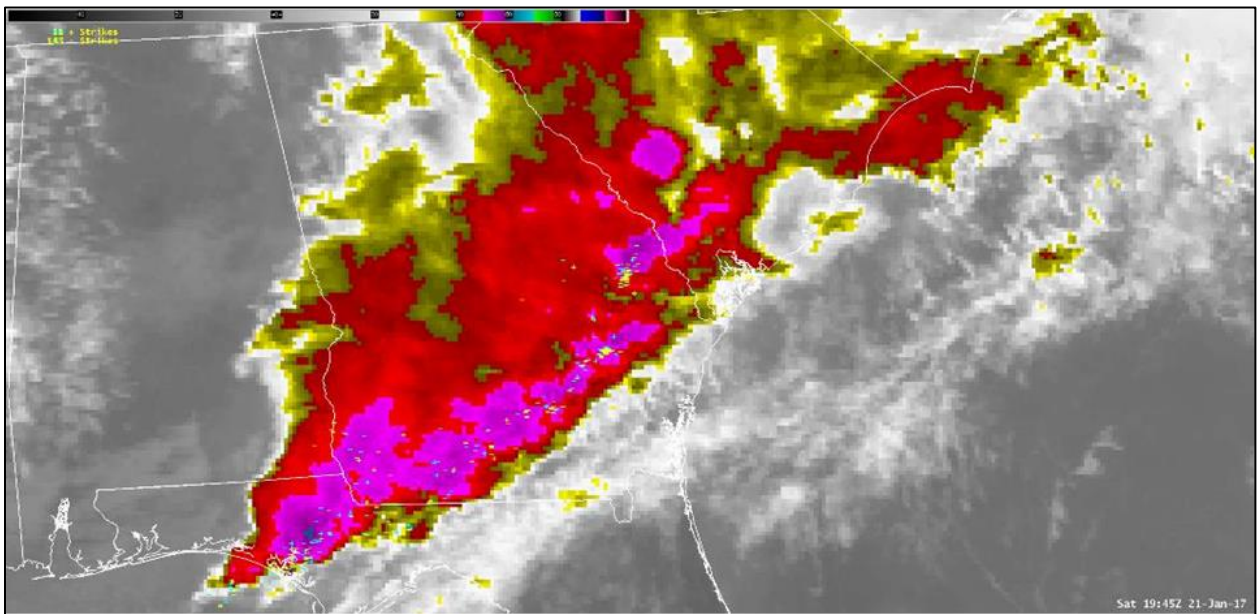


Area under SPC's Tornado Watch #19 issued in the early morning on January 22.

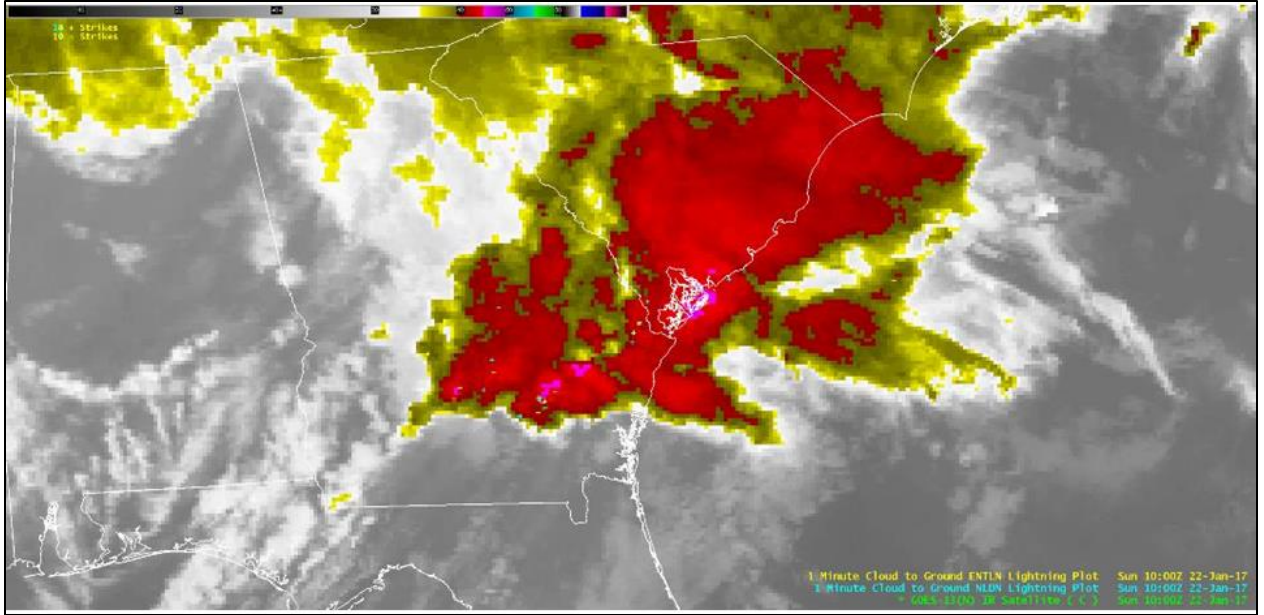




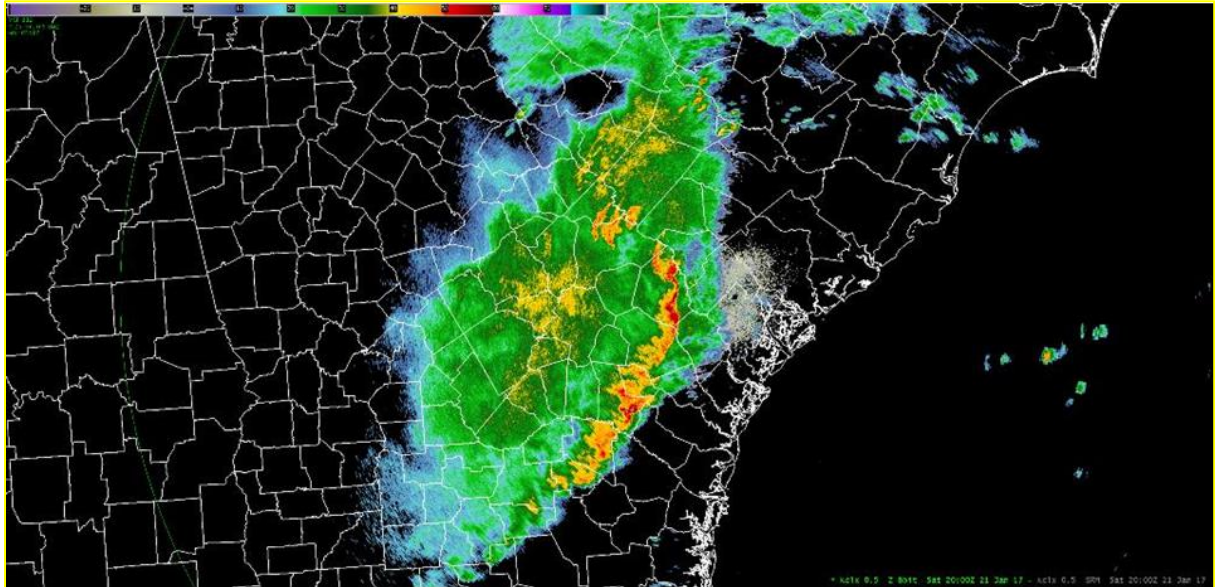
*Visible satellite image at 245 pm EST on January 21 showing the QLCS advancing through the region.*



*Infrared satellite image during the afternoon on January 21 showing colder cloud top temperatures (pink) along with cloud-to-ground lightning strikes.*

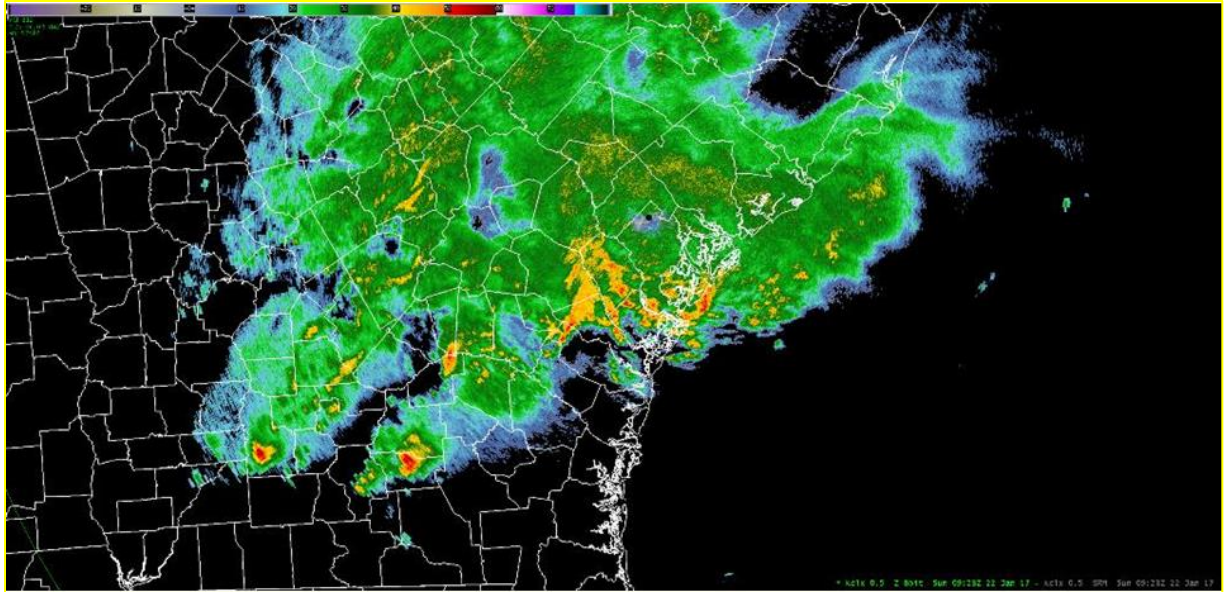


*Infrared satellite image during the early morning on January 22, about 35 minutes after the northern Liberty County tornado.*



*Doppler radar reflectivity image showing the QLCS advancing into our region during the afternoon of January 21. This thunderstorm complex produced 3 tornadoes, large hail and scattered reports of straight-line wind damage.*



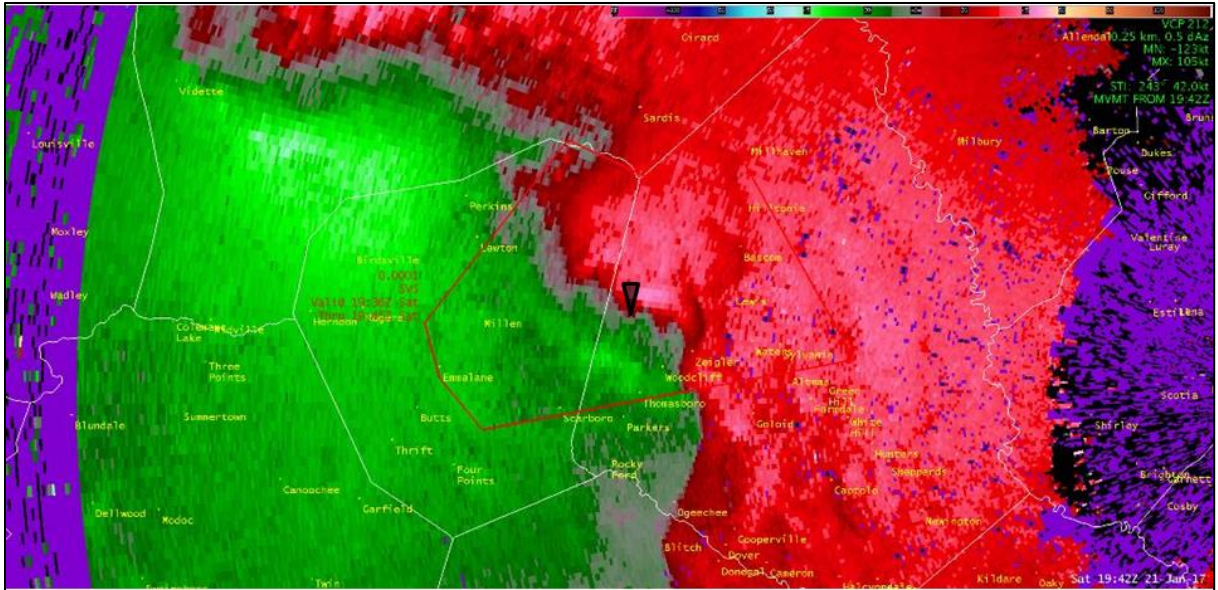


*Doppler radar reflectivity image showing the thunderstorm complex which produced the early Sunday morning, January 22, EF-1 tornado in Liberty County, GA. These thunderstorms also produced a 64 mph wind gust at Fort Stewart and knocked down a couple of trees in Chatham County, GA.*

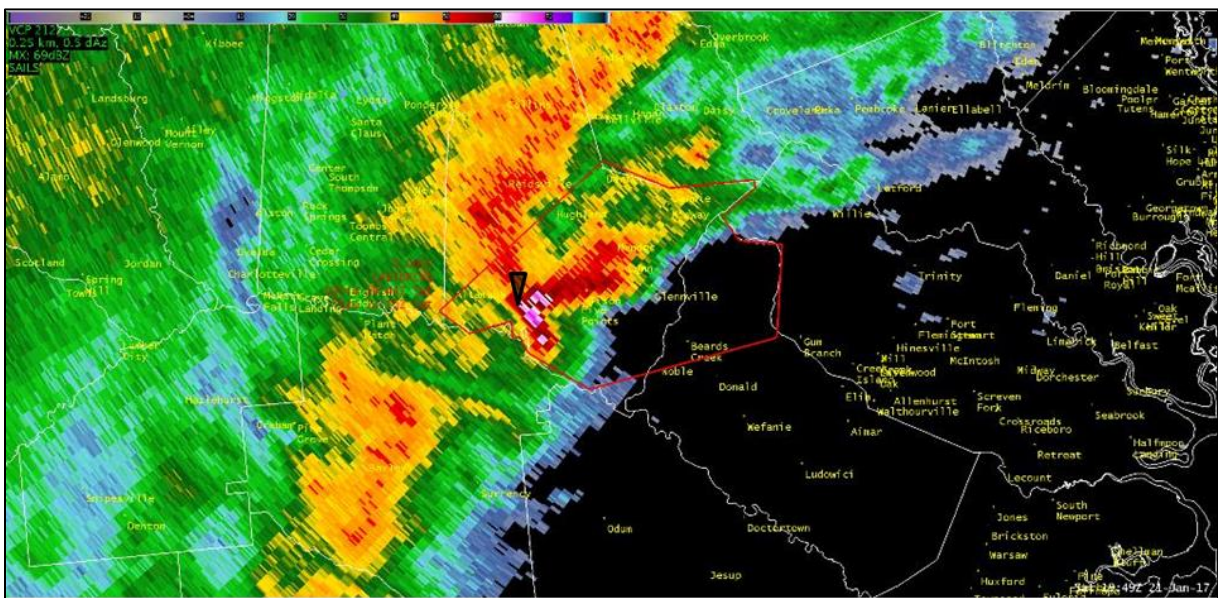


*Doppler radar reflectivity image showing the first tornado of January 21, an EF-0, which touched down briefly at 242 pm EST in western Screven County. The tornado location is depicted by the triangle.*



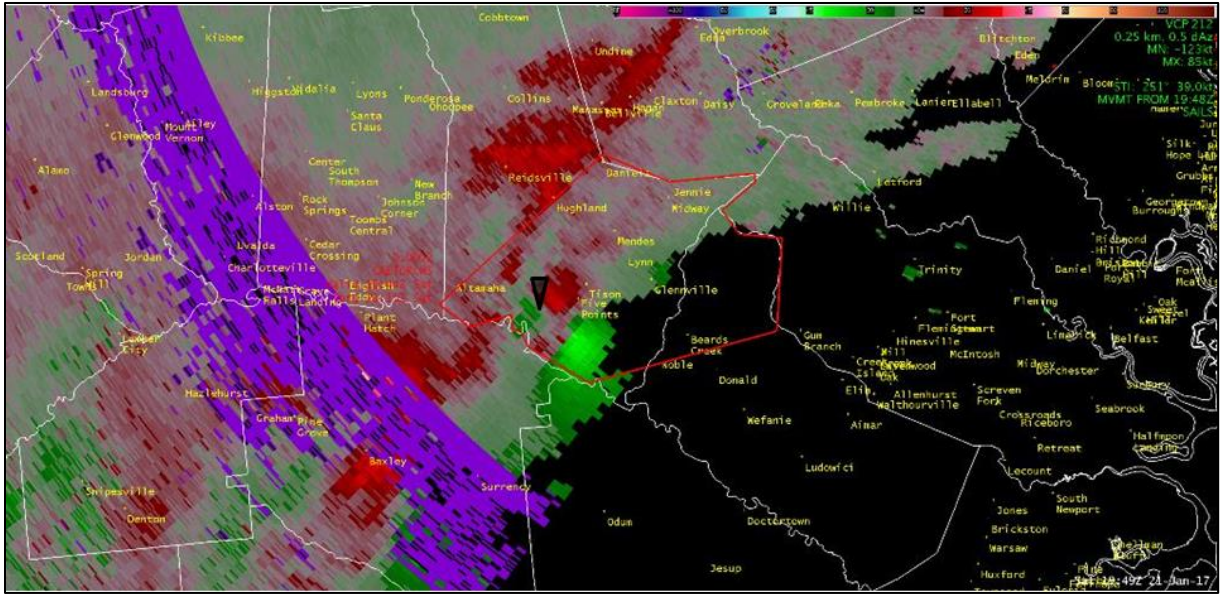


*Doppler radar storm relative velocity image of the western Screven County tornado at 242 pm EST. The tornado location is depicted by the triangle.*

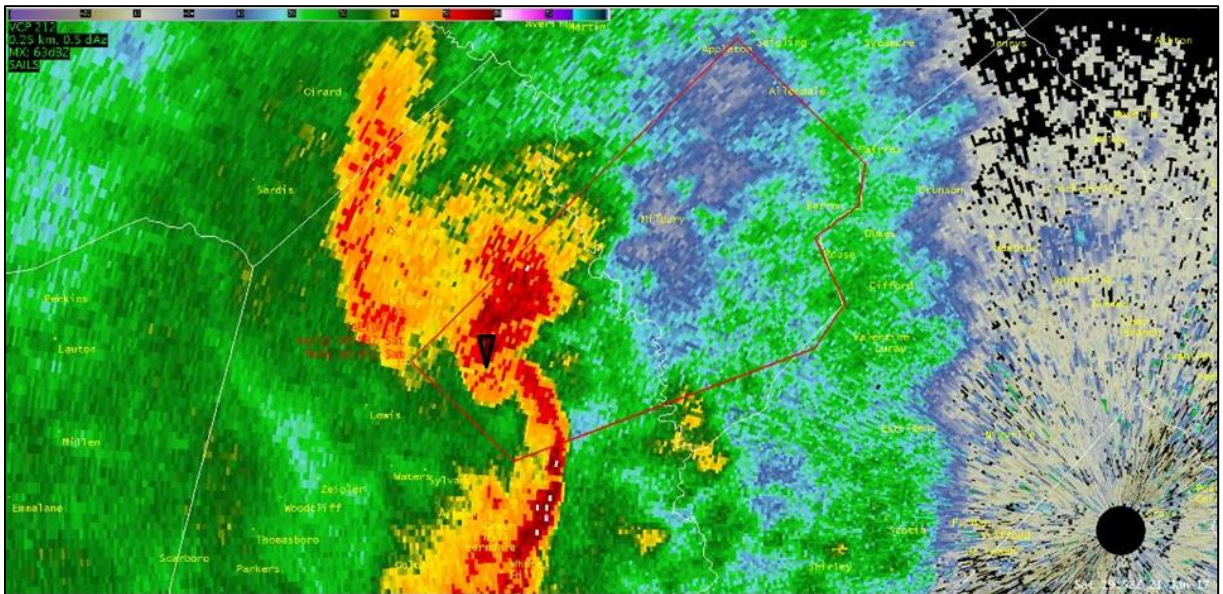


*Doppler radar reflectivity image at 250 pm EST during the brief life of the EF-0 tornado in Tattnall County, GA. This storm also produced golf ball sized hail. The tornado location is depicted by the triangle.*



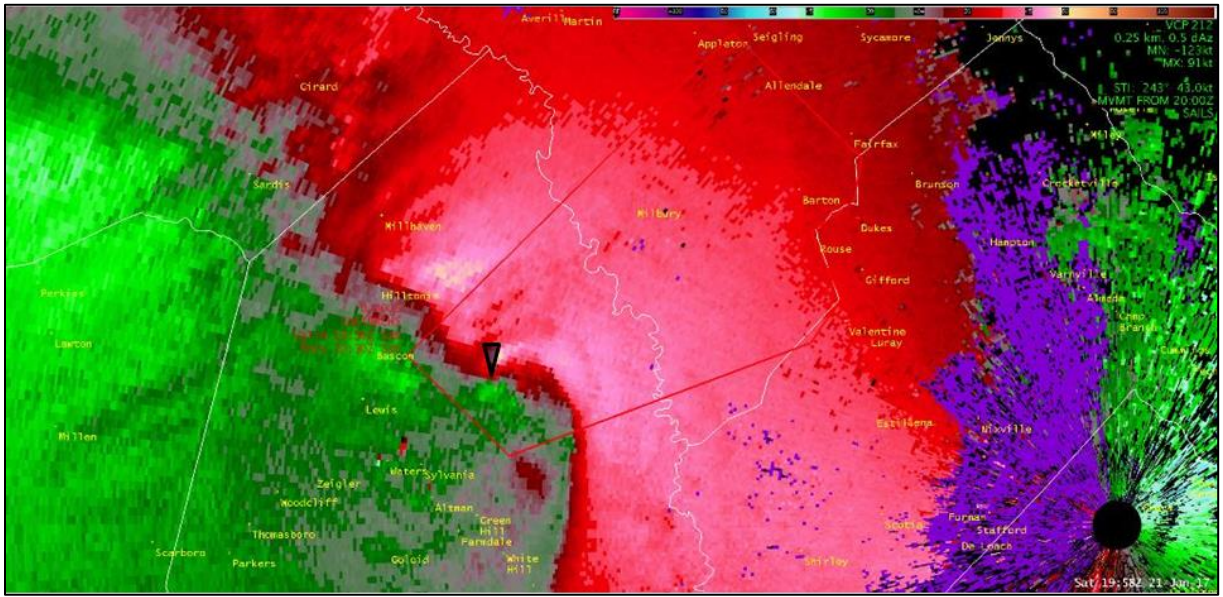


*Doppler radar storm relative velocity image of the Tattnall County tornado at 250 pm EST. The tornado location is depicted by the triangle.*

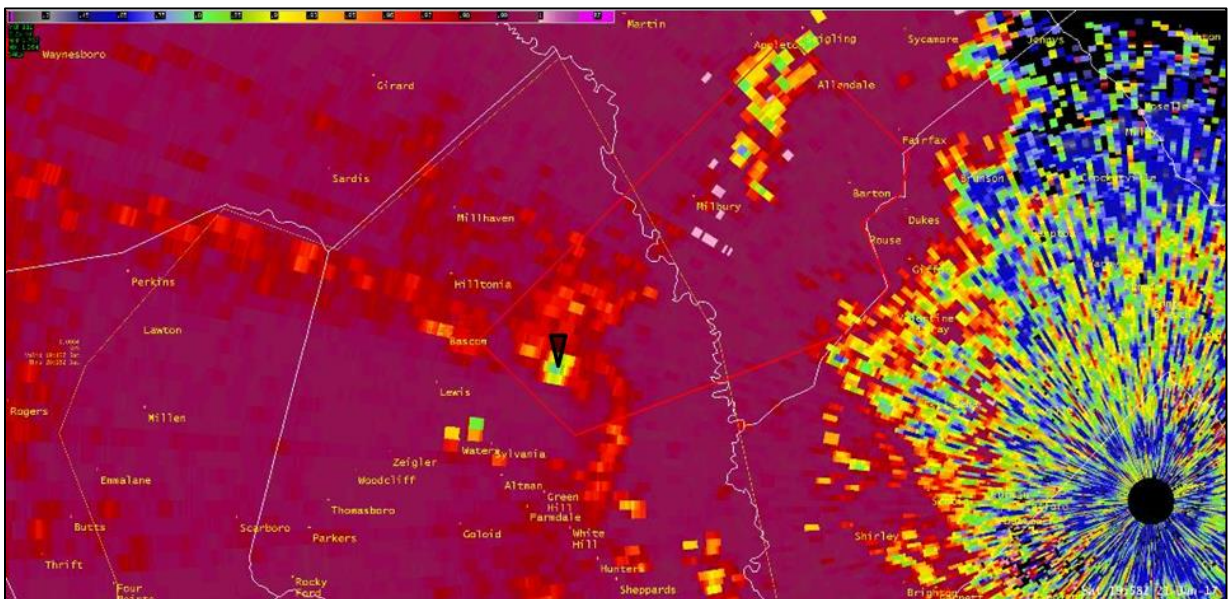


*Doppler radar reflectivity image of the third tornado of Saturday afternoon, an EF-1, which touched down in a cemetery in east-central Screven County at 252 pm EST and travelled east-northeast for almost 2.5 miles. The tornado location is depicted by the triangle.*



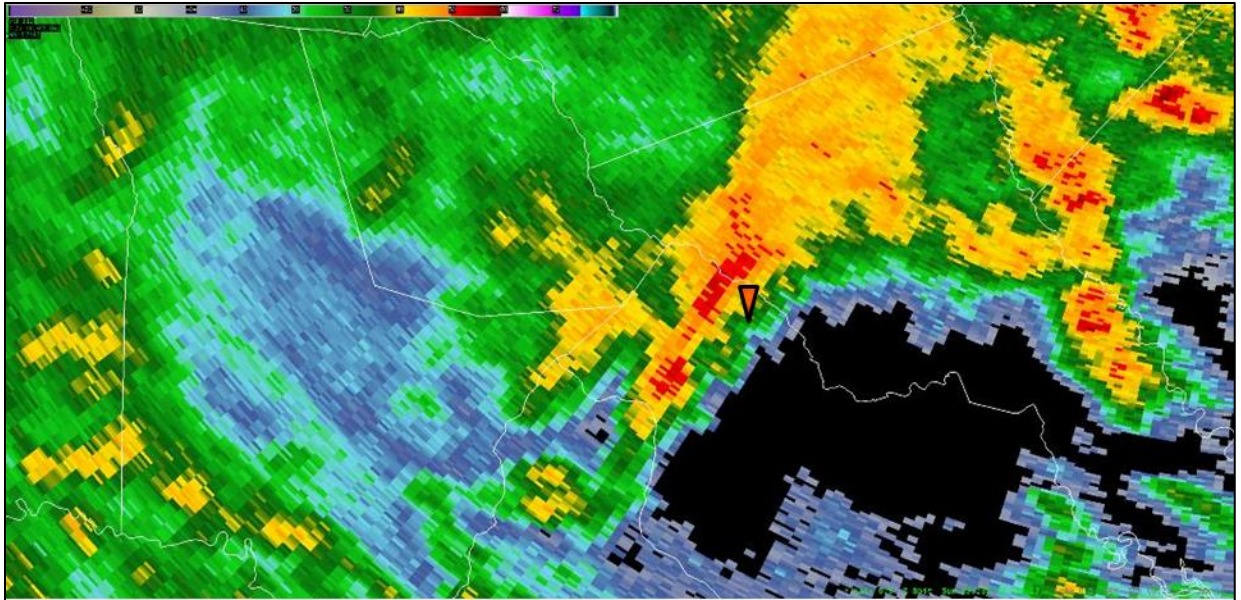


*Doppler radar storm relative velocity image of the EF-1 Screven County, GA tornado. The tornado location is depicted by the triangle.*

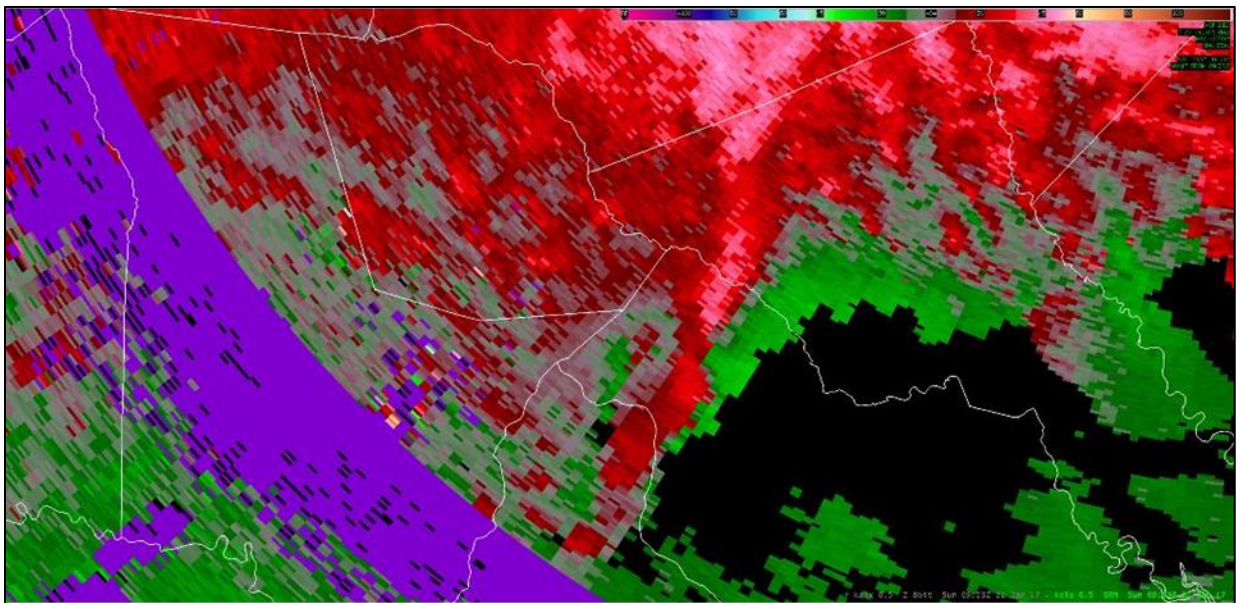


*Doppler radar correlation coefficient image of the EF-1 tornado in Screven County, GA. This image depicts a tornado debris signature (TDS), which indicates debris picked up by the tornado. The tornado location is depicted by the triangle.*



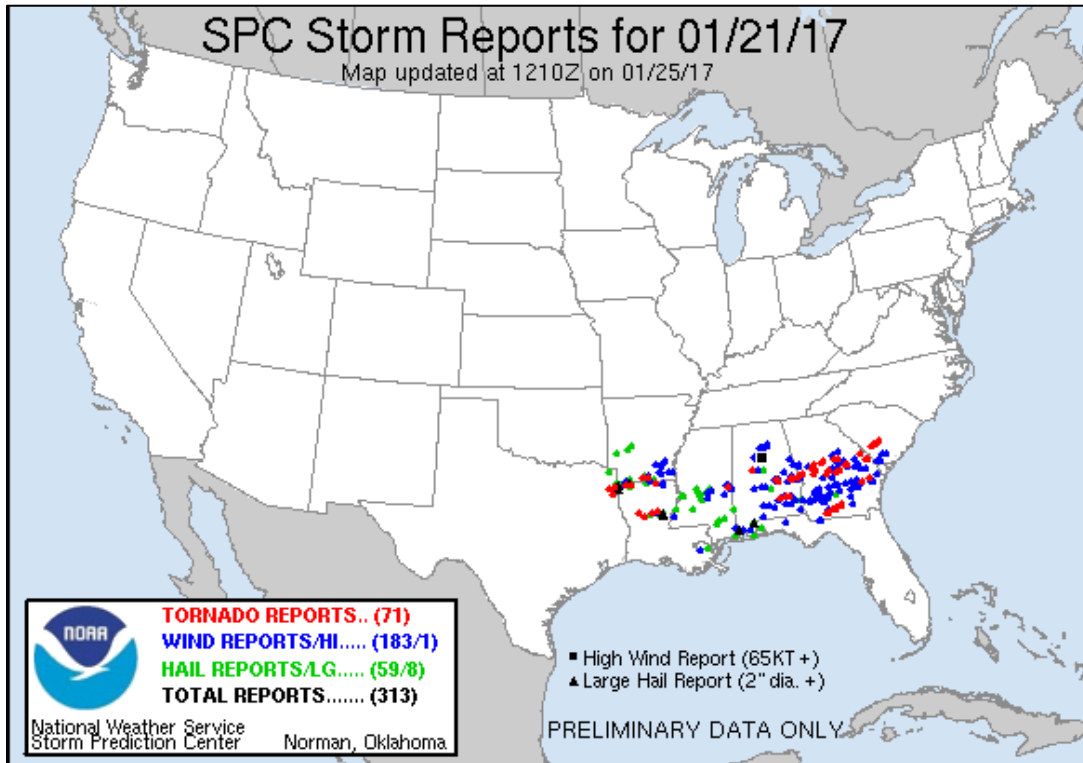


*Doppler radar reflectivity image taken about 2 minutes before the touchdown of the brief EF-1 tornado early Sunday morning, January 22, in northern Liberty County, GA. The tornado location is depicted by the triangle.*



*Doppler radar storm relative velocity image about 2 minutes before the brief touchdown of the EF-1 tornado early Sunday morning in northern Liberty County, GA.*

## STORM REPORTS



*NWS Storm Prediction Center map of severe weather reports for January 21, 2017.*

Public Information Statement  
National Weather Service Charleston SC  
603 PM EST Tue Jan 24 2017

...Multiple Tornadoes Confirmed During 1/22/2017 Storm Surveys...

...Tornado Confirmed Near Willie in Liberty County Georgia...

Location...Liberty County Georgia  
Date...1/22/2017 Estimated  
Time...425 AM EST  
Maximum EF-Scale Rating...EF-1  
Estimated Maximum Wind Speed...90-95 mph  
Maximum Path Width...250 yards  
Path Length...650 yards  
Beginning Lat/Lon...32.01N / -81.67W  
Ending Lat/Lon...32.01N / -81.66W  
\* Fatalities...0  
\* Injuries...0

\* The information in this statement is preliminary and subject to change pending final review of the event(s) and publication in NWS Storm Data.



...Summary...

The National Weather Service in Charleston SC has confirmed a tornado near Willie in Liberty County Georgia during the early morning of 1/22/2017.

The tornado touched down at about 425 AM EST west of State Route 119 and crossed the road north of Willie. Along the brief path toward the east-northeast the tornado damaged at least 100 trees. Numerous large trees were snapped off well above the ground. Several trees were also uprooted. The tornado lifted less than 2 minutes after touching down.

This information can also be found on our website at:  
[weather.gov/chs](http://weather.gov/chs).

For reference...the Enhanced Fujita Scale classifies tornadoes into the following categories:

EF0...wind speeds 65 to 85 mph.  
EF1...wind speeds 86 to 110 mph.  
EF2...wind speeds 111 to 135 mph.  
EF3...wind speeds 136 to 165 mph.  
EF4...wind speeds 166 to 200 mph.  
EF5...wind speeds greater than 200 mph.

&&

...Tornado Confirmed West of Five Points in Tattnall County Georgia...

Location...Near Five Points in Tattnall County Georgia

Date...1/21/2017

Estimated Time...250 PM EST

Maximum EF-Scale Rating...EF-0

Estimated Maximum Wind Speed...85 mph

Maximum Path Width...250 yards

Path Length...0.71 mile

Beginning Lat/Lon...31.93N / -82.09W

Ending lat/Lon...31.92N / -82.08W

\* Fatalities...0

\* Injuries...0

\* The information in this statement is preliminary and subject to change pending final review of the event(s) and publication in NWS Storm Data.

...Summary...

The National Weather Service in Charleston SC has confirmed a tornado west of Five Points in Tattnall County Georgia during the afternoon of 1/21/2017.

This brief EF-0 tornado touched down at 250 PM EST on a farm between Rushing Boone Road and State Route 178. Following a path toward the east-southeast, this tornado peeled metal roofing from five farm outbuildings, produced minor shingle damage to a residence and snapped off a large tree. The tornado crossed State Route 178 and snapped off and uprooted a few large trees before

lifting less than 2 minutes after touchdown.

This information can also be found on our website at:  
weather.gov/chs.

For reference...the Enhanced Fujita Scale classifies tornadoes into the following categories:

EF0...wind speeds 65 to 85 mph.  
EF1...wind speeds 86 to 110 mph.  
EF2...wind speeds 111 to 135 mph.  
EF3...wind speeds 136 to 165 mph.  
EF4...wind speeds 166 to 200 mph.  
EF5...wind speeds greater than 200 mph.

&&

...Tornado Confirmed West-Northwest of Lewis in Screven County Georgia...

Location...West-northwest of Lewis in Screven County Georgia...

Date...1/21/2017

Estimated Time...242 PM EST

Maximum EF-Scale Rating...EF-0

Estimated Maximum Wind Speed...80 mph

Maximum Path Width...50 yards

Path Length...0.7 miles

Beginning Lat/Lon...32.82N / -81.76W

Ending lat/Lon...32.83N / -81.76W

\* Fatalities...0

\* Injuries...0

\* The information in this statement is preliminary and subject to change pending final review of the event(s) and publication in NWS Storm Data.

...Summary...

The National Weather Service in Charleston SC has confirmed a tornado west of Lewis in Screven County Georgia during the afternoon of 1/21/2017.

This tornado touched down along State Route 247/Bay Branch Road, initially damaging a carport attached to a residence. This narrow tornado then followed a path toward the north-northeast, ripping metal roofing from 4 storage buildings and depositing some of this metal in trees on the north side of Buttermilk Road. The tornado then crossed Buttermilk Road and produced significant tree damage along a dirt road, then crossed an open field and produced additional tree damage along the tree line north of the field before lifting. This tornado was on the ground for about 3 minutes and was witnessed by a resident at the corner of Bay Branch and Buttermilk Roads.

This information can also be found on our website at:  
weather.gov/chs.

For reference...the Enhanced Fujita Scale classifies tornadoes



into the following categories:

EF0...wind speeds 65 to 85 mph.  
EF1...wind speeds 86 to 110 mph.  
EF2...wind speeds 111 to 135 mph.  
EF3...wind speeds 136 to 165 mph.  
EF4...wind speeds 166 to 200 mph.  
EF5...wind speeds greater than 200 mph.

&&

...Tornado Confirmed east of Sylvania in Screven County Georgia...

Location...East of Sylvania in Screven County Georgia

Date...1/21/2017

Estimated Time...252 PM EST

Maximum EF-Scale Rating...EF-1

Estimated Maximum Wind Speed...95 mph

Maximum Path Width...525 yards

Path Length...2.44 miles

Beginning Lat/Lon...32.78N / -81.61W

Ending lat/Lon...32.80N / -81.57W

\* Fatalities...0

\* Injuries...0

\* The information in this statement is preliminary and subject to change pending final review of the event(s) and publication in NWS Storm Data.

...Summary...

The National Weather Service in Charleston SC has confirmed a tornado east of Sylvania in Screven County during the afternoon of 1/21/2017.

This tornado touched down in Friendship Memorial Park, initially lifting and rolling a motor vehicle downhill. The tornado was photographed from this cemetery. Continuing a path toward the northeast across the cemetery, the tornado blew down 6 headstones estimated to weigh between 200 and 400 pounds. The tornado then crossed Friendship Road, which bends from a northeast to east-northeast orientation. Close to the south side of Friendship Road, the tornado removed the northeast wall of a metal firehouse, uprooted several large trees and blew over a farm wagon. The tornado then blew off much of the metal roof from a residence just north of Friendship Road, depositing the metal in nearby trees. At the intersection of Friendship Road, Newington Highway and McBride Circle, the tornado blew a large part of the metal roof from another residence and adjacent outbuildings, depositing debris along and north of Newington Highway. An entire stop sign was also deposited in a tree about 50 feet above the ground along north side of Newington Highway. The tornado then crossed a forested area, snapping off the tops of numerous trees as it advanced toward the northeast. A resident's video showed the tornado emerging from the forest along the northern branch of McBride Circle, before it produced roof damage and snapped off a large pine tree on the west side of McBride Circle. The tornado then crossed McBride Circle and tore much of the roof from a residence,

depositing metal and other debris in nearby trees and across a field to the northeast. The tornado then crossed this field and damaged additional trees in the far treeline before lifting.

This information can also be found on our website at: [weather.gov/chs](http://weather.gov/chs).

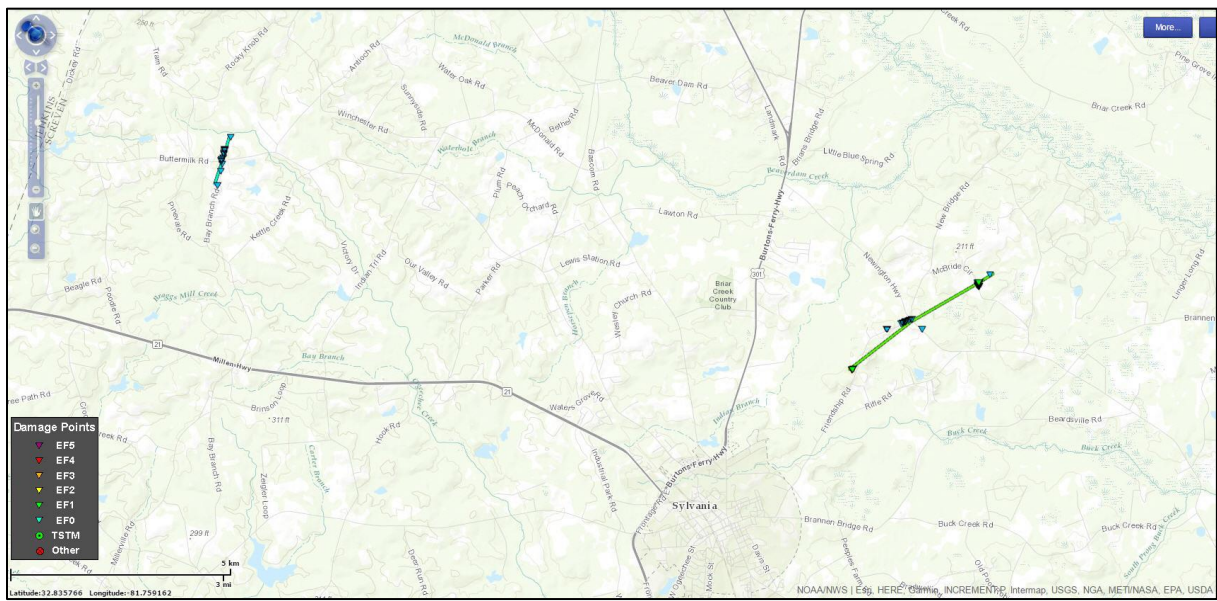
For reference...the Enhanced Fujita Scale classifies tornadoes into the following categories:

- EF0...wind speeds 65 to 85 mph.
- EF1...wind speeds 86 to 110 mph.
- EF2...wind speeds 111 to 135 mph.
- EF3...wind speeds 136 to 165 mph.
- EF4...wind speeds 166 to 200 mph.
- EF5...wind speeds greater than 200 mph.

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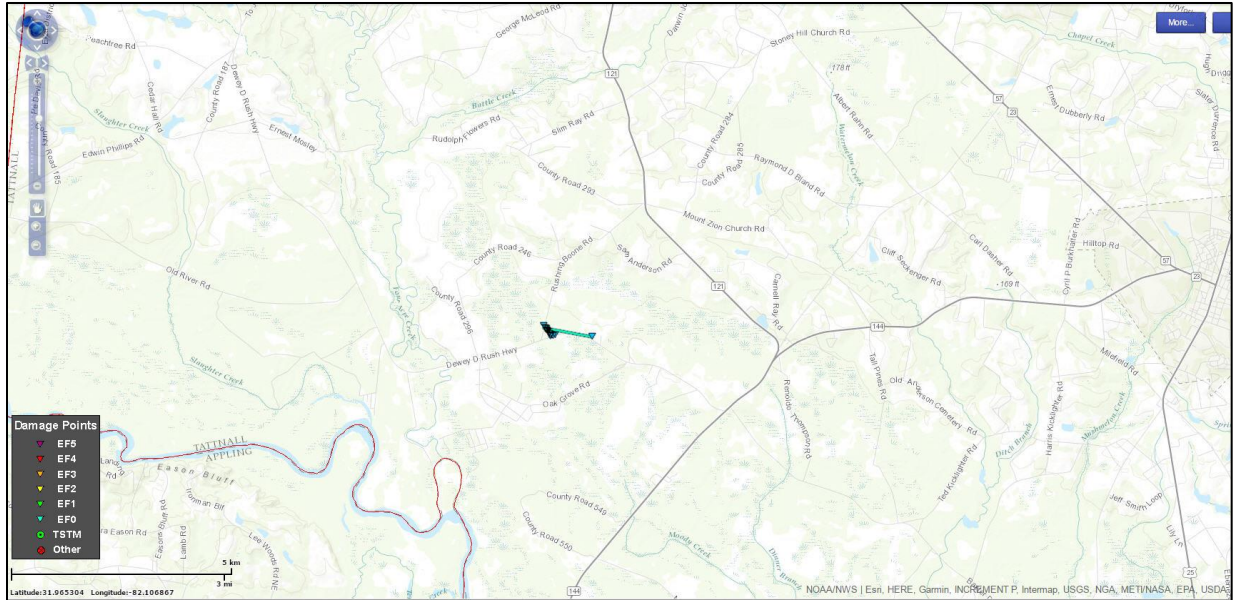
*Public Information Statement issued by WFO Charleston on January 24, 2017 summarizing the 4 confirmed tornadoes.*

## **TORNADO TRACKS AND IMAGES**

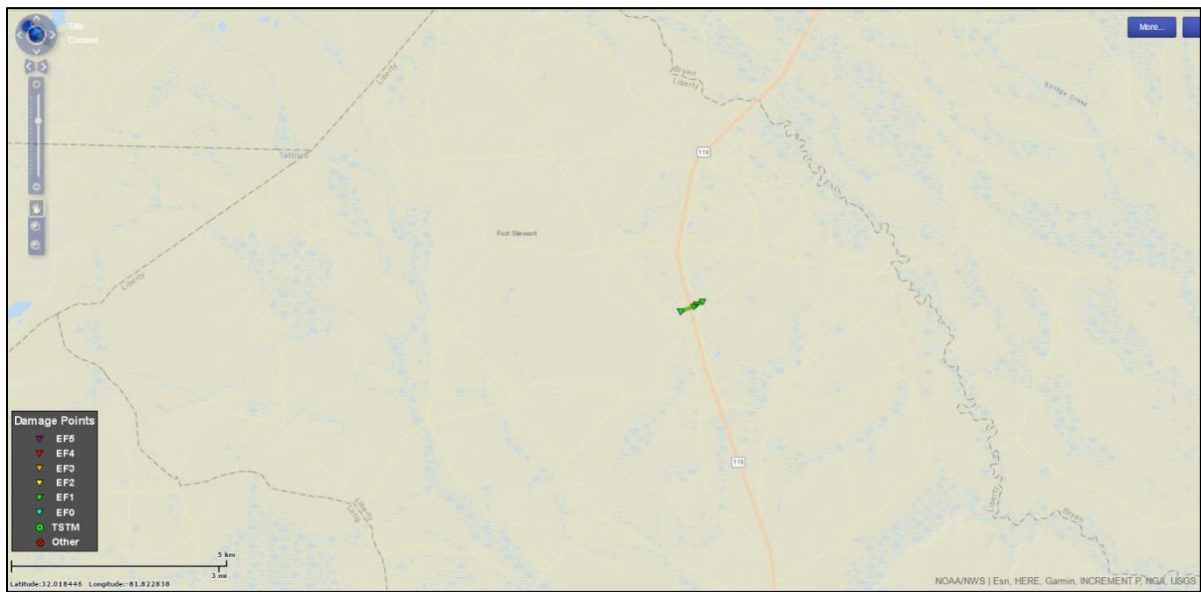


*Tracks of the Screven County, GA EF-0 (west) and EF-1 (east) tornadoes on January 21.*





*Tattall County, GA EF-0 tornado track.*



*Liberty County, GA EF-1 tornado track.*



*Storage building roof damage from Screven County, GA EF-0 tornado near Buttermilk Road on January 21.*



*Tree damage from Screven County, GA EF-0 tornado, just north of Buttermilk Road on January 21.*





*Damage from Tattnall County, GA EF-0 tornado near State Route 178 on January 21.*



*Damage from the Tattnall County, GA EF-0 tornado near State Route 178 on January 21.*



*Damage caused along Friendship Road by the second Screven County, GA tornado on January 21.*



*EF-1 damage produced along McBride Circle by the second Screven County, GA tornado on January 21.*





*Tree damage created by the brief EF-1 tornado in northern Liberty County, GA during the pre-dawn hours on January 22.*