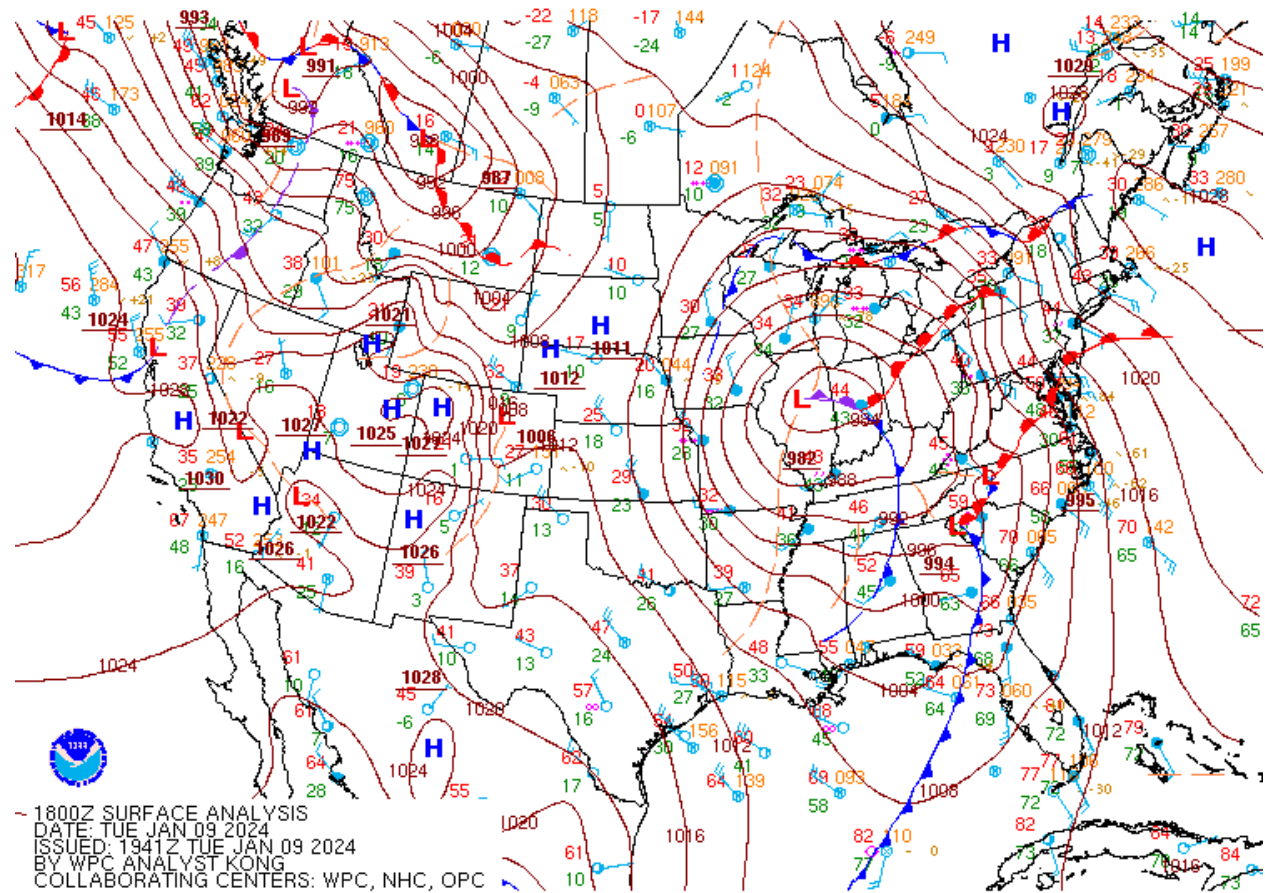


# January 09, 2024 Severe Weather Event

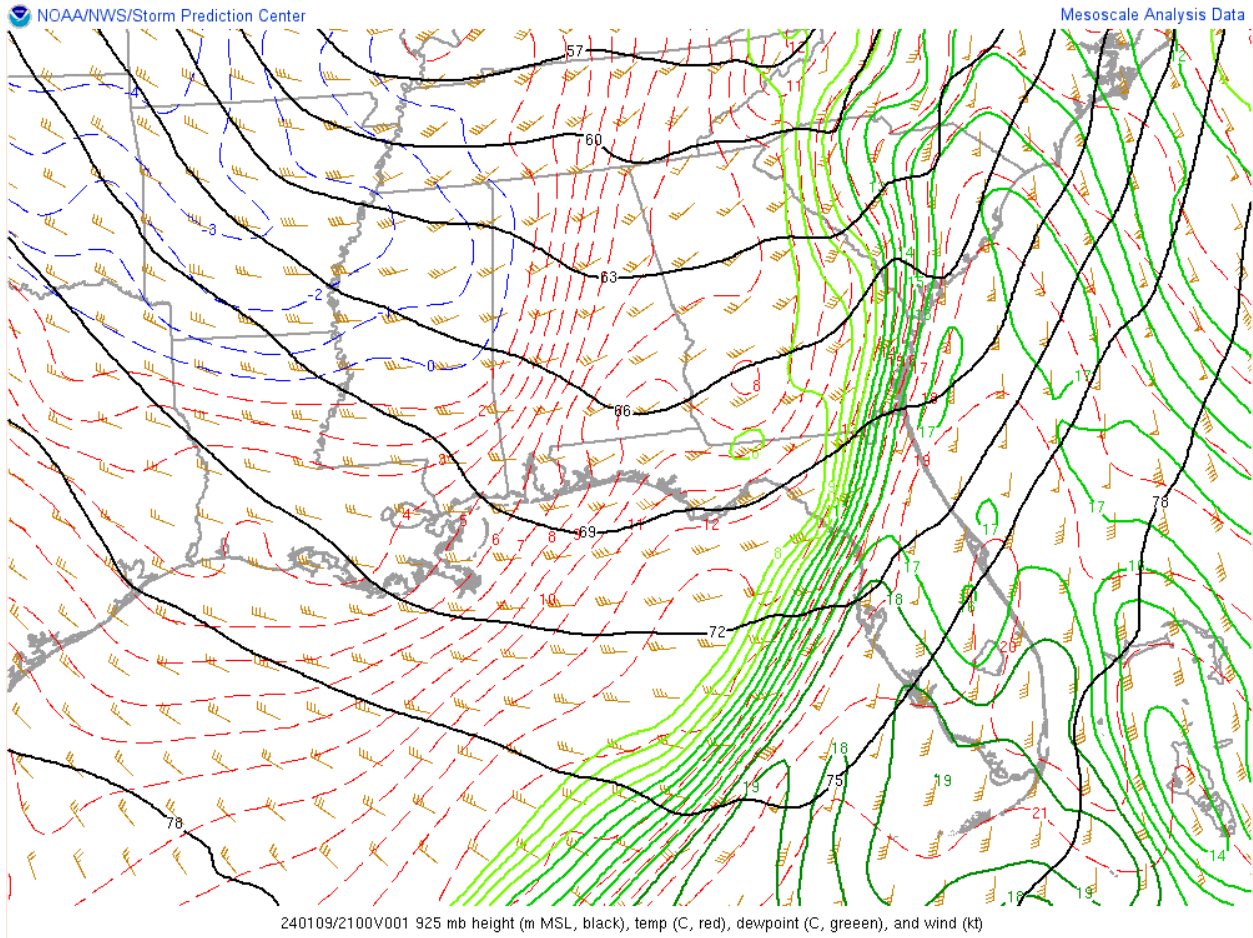
On January 09, 2024 a potent storm system moved across the Florida peninsula. As the storm system approached, a warm and humid air mass lifting northward over the state produced strong winds not associated with any storms. Just ahead of the cold front, a squall line pushed through the region producing an EF-1 tornado in Northern Hillsborough County, an EF-0 tornado in Pinellas County, and damaging straight-line winds in Sarasota County, FL.

## Environment:

With an upper-level trough moving across the Eastern United States, a surface frontal boundary propagated southeast across the Florida peninsula on January 09, 2024. This was after a recent warm front had lifted northward, allowing a warm and humid air mass to settle across the central and southern Florida peninsula.

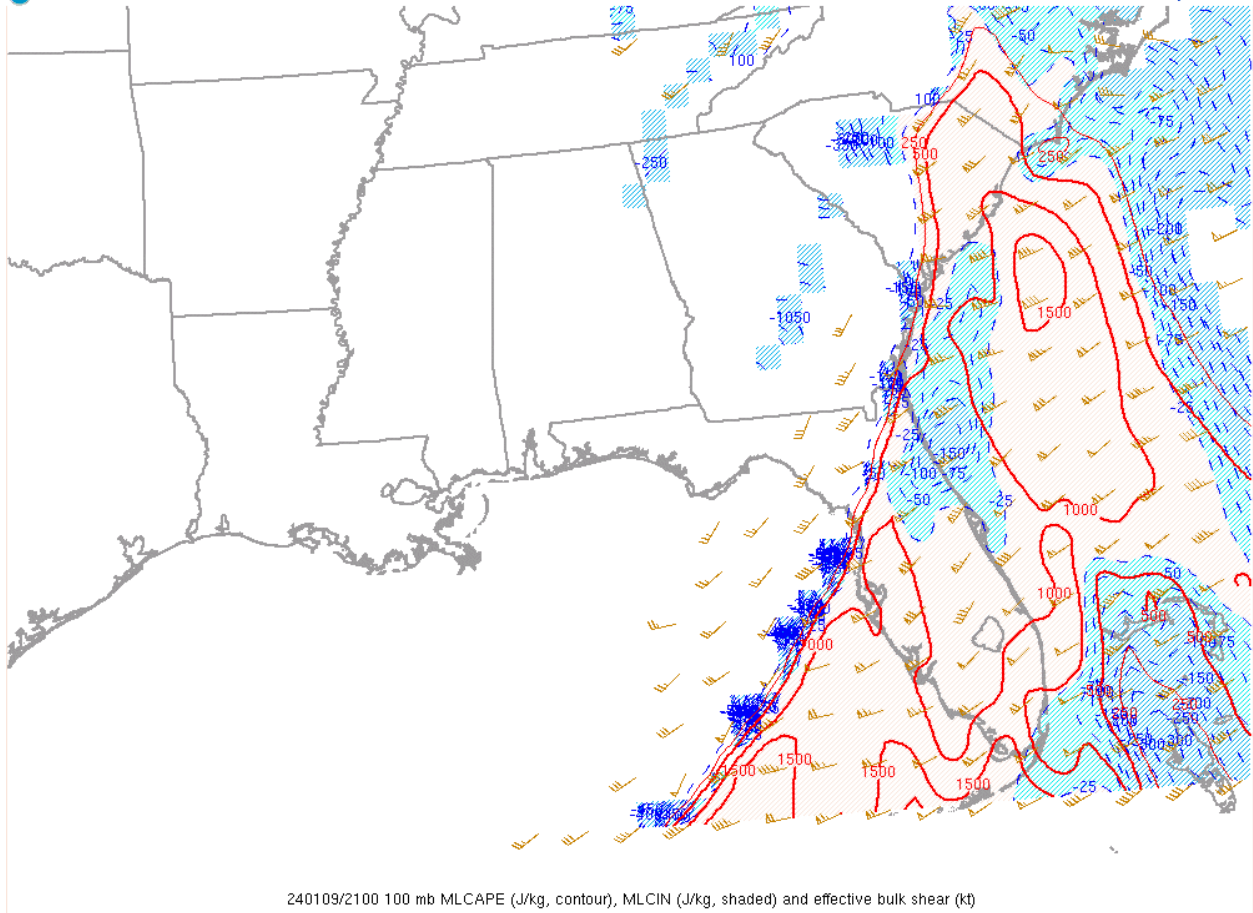


WPC 18Z Surface Analysis from January 09, 2024



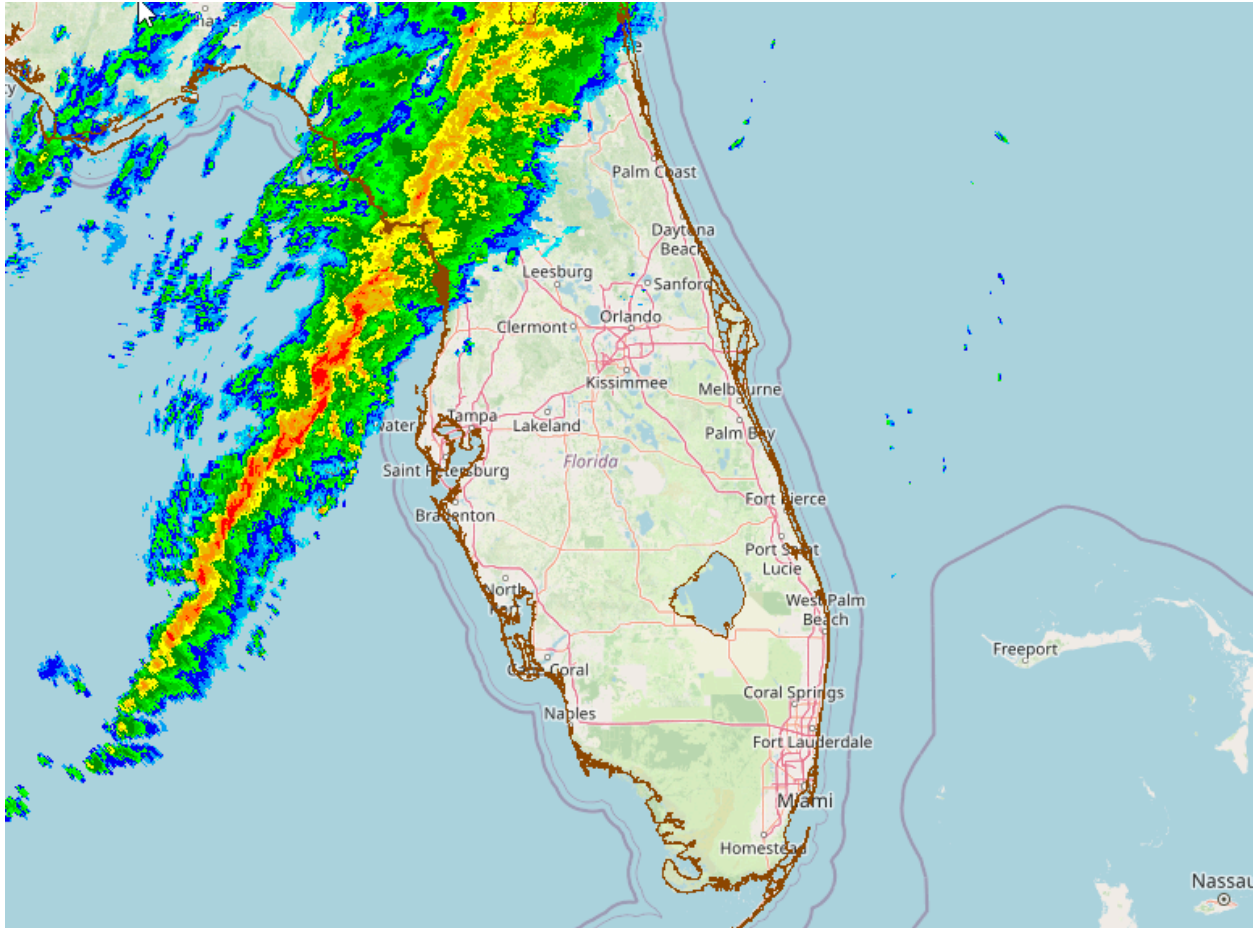
925 mb Analysis from SPC Mesoanalysis Archive - Jan 09, 2024

In response to conditions, a warm, humid, and unstable air mass settled across the region. The approaching frontal boundary provided a source of lift to generate thunderstorms.



Mesoscale Analysis from SPC showing MLCAPE, MLCIN, and Effective Bulk Shear at 21Z, 01/09/2024

By late afternoon, a line of storms approached the Central Florida Peninsula, eventually producing two tornadoes and significant wind damage in Sarasota County, Florida.



Zoomed out radar view at approximately 19:30Z on January 09, 2024

### **Significant Weather Impacts - Wind:**

The first significant impact occurred before any storms arrived in the area. The sharp change from a warm and humid air mass over the peninsula and a much colder and more stable air mass behind the storms led to strong gradient winds across the region. These developed early in the day before any storms were near. Some of the peak wind gusts are included below.

Public Information Statement

National Weather Service Tampa Bay Ruskin FL  
924 PM EST Tue Jan 9 2024

...HIGHEST WIND REPORTS (Last 24 Hours)...

| Location                                     | Speed  | Time/Date     | <a href="#">Lat/Lon</a> |
|--|--------|---------------|-------------------------|
| ...Florida...                                |        |               |                         |
| ...Charlotte County...                       |        |               |                         |
| Punta Gorda                                  | 56 MPH | 0215 PM 01/09 | 26.92N/82.00W           |
| 2.2 NE Port Charlotte (WEATH                 | 40 MPH | 1040 AM 01/09 | 27.00N/82.08W           |
| Grove City                                   | 40 MPH | 0600 PM 01/09 | 26.90N/82.31W           |
| ...Citrus County...                          |        |               |                         |
| 2.9 W Crystal River (WEATHER                 | 51 MPH | 0300 PM 01/09 | 28.90N/82.65W           |
| Homosassa                                    | 44 MPH | 0145 PM 01/09 | 28.72N/82.51W           |
| Lecanto High School                          | 41 MPH | 0120 PM 01/09 | 28.82N/82.50W           |
| Inverness                                    | 39 MPH | 0155 PM 01/09 | 28.80N/82.32W           |
| ...DeSoto County...                          |        |               |                         |
| Arcadia (WEATHERSTEM)                        | 39 MPH | 0500 PM 01/09 | 27.22N/81.86W           |
| ...Hardee County...                          |        |               |                         |
| 0.6 SW Wauchula (WEATHERSTEM                 | 39 MPH | 0240 PM 01/09 | 27.54N/81.82W           |
| ...Hernando County...                        |        |               |                         |
| Brooksville                                  | 51 MPH | 0302 PM 01/09 | 28.47N/82.45W           |
| Weeki Wachee                                 | 50 MPH | 1038 AM 01/09 | 28.52N/82.57W           |
| ...Highlands County...                       |        |               |                         |
| LAKE PLACID                                  | 62 MPH | 1210 PM 01/09 | 27.30N/81.36W           |
| Fswn Highlands Avon Park                     | 48 MPH | 0650 PM 01/09 | 27.56N/81.52W           |
| Avon Park Af Range 1                         | 39 MPH | 0122 PM 01/09 | 27.60N/81.21W           |
| Lake Wales                                   | 39 MPH | 0746 PM 01/09 | 27.44N/81.39W           |
| ...Hillsborough County...                    |        |               |                         |
| Macdill AFB Tamp                             | 60 MPH | 0431 PM 01/09 | 27.85N/82.52W           |
| Fswn Tampa International Air                 | 55 MPH | 1150 AM 01/09 | 27.98N/82.53W           |
| Fswn Steinbrenner Field                      | 48 MPH | 0350 PM 01/09 | 27.98N/82.51W           |
| Tampa  | 44 MPH | 0340 PM 01/09 | 27.97N/82.53W           |
| 2.4 NW Temple Terrace (WEATH                 | 42 MPH | 1230 PM 01/09 | 28.06N/82.42W           |
| Fpr Wusf Tampa                               | 41 MPH | 0410 PM 01/09 | 28.06N/82.41W           |
| Tampa Bay Rowdies                            | 41 MPH | 0420 PM 01/09 | 28.02N/82.54W           |
| Tampa Executive                              | 40 MPH | 1235 PM 01/09 | 28.02N/82.33W           |
| ...Lee County...                             |        |               |                         |
| Fort Myers                                   | 52 MPH | 0705 PM 01/09 | 26.58N/81.87W           |
| Southwest Internat                           | 45 MPH | 1250 PM 01/09 | 26.54N/81.77W           |
| Desoto-Orange                                | 42 MPH | 0714 PM 01/09 | 26.67N/81.77W           |
| Fswn Bonita Springs Fire 24                  | 40 MPH | 1250 PM 01/09 | 26.34N/81.74W           |
| <a href="#">Cape</a> Coral Fire Department S | 39 MPH | 0910 AM 01/09 | 26.67N/82.04W           |
| Fswn San Carlos Park Fire 54                 | 39 MPH | 0710 PM 01/09 | 26.50N/81.81W           |
| Fort Myers                                   | 39 MPH | 0153 PM 01/09 | 26.53N/81.75W           |
| ...Levy County...                            |        |               |                         |
| Chiefland                                    | 50 MPH | 0100 PM 01/09 | 29.39N/82.91W           |
| CHIEFLAND                                    | 44 MPH | 1130 AM 01/09 | 29.40N/82.87W           |

...Manatee County...

|                              |        |               |               |
|------------------------------|--------|---------------|---------------|
| Sarasota Bradent             | 60 MPH | 0457 PM 01/09 | 27.40N/82.57W |
| 1.9 W Bayshore Gardens (WEAT | 49 MPH | 0400 PM 01/09 | 27.44N/82.61W |
| Lakewood Ranch               | 46 MPH | 1059 AM 01/09 | 27.41N/82.38W |
| Ruskin                       | 40 MPH | 1226 PM 01/09 | 27.41N/82.25W |

...Pasco County...

|                              |        |               |               |
|------------------------------|--------|---------------|---------------|
| Fswn Pasco Land O Lakes Fir  | 49 MPH | 0110 PM 01/09 | 28.22N/82.46W |
| Zephyrhills Municipal Airpor | 49 MPH | 0455 PM 01/09 | 28.23N/82.15W |
| Pso Range Complex            | 48 MPH | 0240 PM 01/09 | 28.37N/82.55W |
| Fswn Pasco Hudson            | 44 MPH | 1130 AM 01/09 | 28.37N/82.68W |
| Fswn Pasco Wesley Chapel     | 44 MPH | 0440 PM 01/09 | 28.27N/82.28W |
| Pasco Fire Rescue Station 9  | 44 MPH | 0140 PM 01/09 | 28.32N/82.56W |
| Fswn Pasco Portable Eru      | 43 MPH | 0230 PM 01/09 | 28.27N/82.67W |
| St. Petersburg               | 43 MPH | 0127 PM 01/09 | 28.35N/82.65W |
| Port Richey                  | 43 MPH | 1230 PM 01/09 | 28.27N/82.73W |
| Land o Lakes                 | 42 MPH | 0421 PM 01/09 | 28.19N/82.52W |
| 3.6 W Land O Lakes (WEATHER  | 41 MPH | 1120 AM 01/09 | 28.20N/82.51W |
| Fswn Pasco Land O Lakes Nor  | 41 MPH | 0320 PM 01/09 | 28.30N/82.50W |
| 1.8 NE Land O Lakes (WEATHE  | 39 MPH | 0300 PM 01/09 | 28.23N/82.43W |
| Fswn Pasco Land O Lakes Wes  | 39 MPH | 1230 PM 01/09 | 28.20N/82.52W |
| WESLEY CHAPEL                | 39 MPH | 0445 PM 01/09 | 28.26N/82.25W |

...Pinellas County...

|                              |        |               |               |
|------------------------------|--------|---------------|---------------|
| Largo Fire Rescue Station 40 | 60 MPH | 1210 PM 01/09 | 27.92N/82.71W |
| Crystal Beach                | 53 MPH | 0330 PM 01/09 | 28.10N/82.78W |
| 0.8 E Tarpon Springs (WEATHE | 51 MPH | 0400 PM 01/09 | 28.14N/82.74W |
| 1.0 E Saint Petersburg (WEAT | 49 MPH | 1250 PM 01/09 | 27.76N/82.66W |
| Dunedin Causeway             | 49 MPH | 0119 PM 01/09 | 28.06N/82.81W |
| Belleair                     | 48 MPH | 0400 PM 01/09 | 27.95N/82.81W |
| St Petersburg - Albert Whitt | 48 MPH | 1053 AM 01/09 | 27.77N/82.63W |
| Largo Fire Rescue Station 38 | 47 MPH | 1200 PM 01/09 | 27.89N/82.74W |
| Seminole                     | 47 MPH | 1045 AM 01/09 | 27.87N/82.66W |
| Clearwater Beach             | 46 MPH | 0935 AM 01/09 | 27.99N/82.83W |
| Seminole                     | 46 MPH | 0400 PM 01/09 | 27.96N/82.80W |
| St. Petersburg, FL           | 46 MPH | 1054 AM 01/09 | 27.76N/82.63W |
| 1.9 NE Belleair (WEATHERSTEM | 43 MPH | 1210 PM 01/09 | 27.96N/82.80W |
| Clearwater                   | 41 MPH | 1215 PM 01/09 | 27.98N/82.75W |
| St. Petersburg               | 40 MPH | 1225 PM 01/09 | 27.71N/82.69W |
| Tarpon Springs               | 40 MPH | 1030 AM 01/09 | 28.17N/82.79W |
| 3.2 S Saint Petersburg (WEAT | 39 MPH | 0420 PM 01/09 | 27.71N/82.66W |
| 1.9 NW Pinellas Park (WEATHE | 39 MPH | 0410 PM 01/09 | 27.88N/82.73W |
| Largo Fire Rescue Station 41 | 39 MPH | 1230 PM 01/09 | 27.91N/82.79W |

...Polk County...

|                              |        |               |               |
|------------------------------|--------|---------------|---------------|
| Winter Haven                 | 46 MPH | 0538 PM 01/09 | 28.07N/81.75W |
| Lakeland                     | 44 MPH | 0446 PM 01/09 | 28.00N/81.93W |
| Lakeland Regiona             | 44 MPH | 0520 PM 01/09 | 27.97N/82.02W |
| Griffin                      | 43 MPH | 0124 PM 01/09 | 28.08N/82.04W |
| Mulberry                     | 40 MPH | 0138 PM 01/09 | 28.25N/81.65W |
| Lake Wales                   | 39 MPH | 0155 PM 01/09 | 27.90N/81.62W |
| Lake Wales Municipal Airport | 39 MPH | 0155 PM 01/09 | 27.89N/81.62W |

...Sarasota County...

|                              |        |               |               |
|------------------------------|--------|---------------|---------------|
| 1.1 SW Sarasota Bradenton (W | 55 MPH | 0120 PM 01/09 | 27.38N/82.56W |
| Sarasota                     | 45 MPH | 1039 AM 01/09 | 27.35N/82.52W |
| 2.6 NE Vamo (WEATHERSTEM)    | 41 MPH | 0340 PM 01/09 | 27.25N/82.46W |
| Venice                       | 41 MPH | 0555 PM 01/09 | 27.07N/82.43W |

...Sumter County...

|             |        |               |               |
|-------------|--------|---------------|---------------|
| Sumterville | 42 MPH | 1255 PM 01/09 | 28.77N/82.05W |
|-------------|--------|---------------|---------------|

```

...Maritime Stations...
Clam Bayou Nature Park      63 MPH    0420 PM 01/09  27.74N/82.69W
St Pete-Clearwater Intl    55 MPH    1200 PM 01/09  27.92N/82.68W
Tampa Bay Cut J            53 MPH    1246 PM 01/09  27.77N/82.57W
Old Port Tampa, FL        51 MPH    0430 PM 01/09  27.86N/82.55W
Skyway Fishing Pier        51 MPH    0935 AM 01/09  27.60N/82.65W
Palmetto                   48 MPH    0100 PM 01/09  27.53N/82.63W
Clearwater Beach Pier 60   48 MPH    0330 PM 01/09  27.98N/82.83W
2 W Tarpon Springs         48 MPH    1054 AM 01/09  28.15N/82.80W
8 SE Saint Petersburg      46 MPH    0354 PM 01/09  27.66N/82.59W
22 SW Longboat Key        45 MPH    0435 PM 01/09  27.17N/82.92W
Cedar Key, FL             45 MPH    0206 PM 01/09  29.14N/83.03W
Sarasota Bay Marker 17    45 MPH    0500 PM 01/09  27.34N/82.56W
Egmont Channel         43 MPH    0429 PM 01/09  27.61N/82.76W

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Observations are collected from a variety of sources with varying equipment and exposures. We thank all volunteer weather observers for their dedication. Not all data listed are considered official.

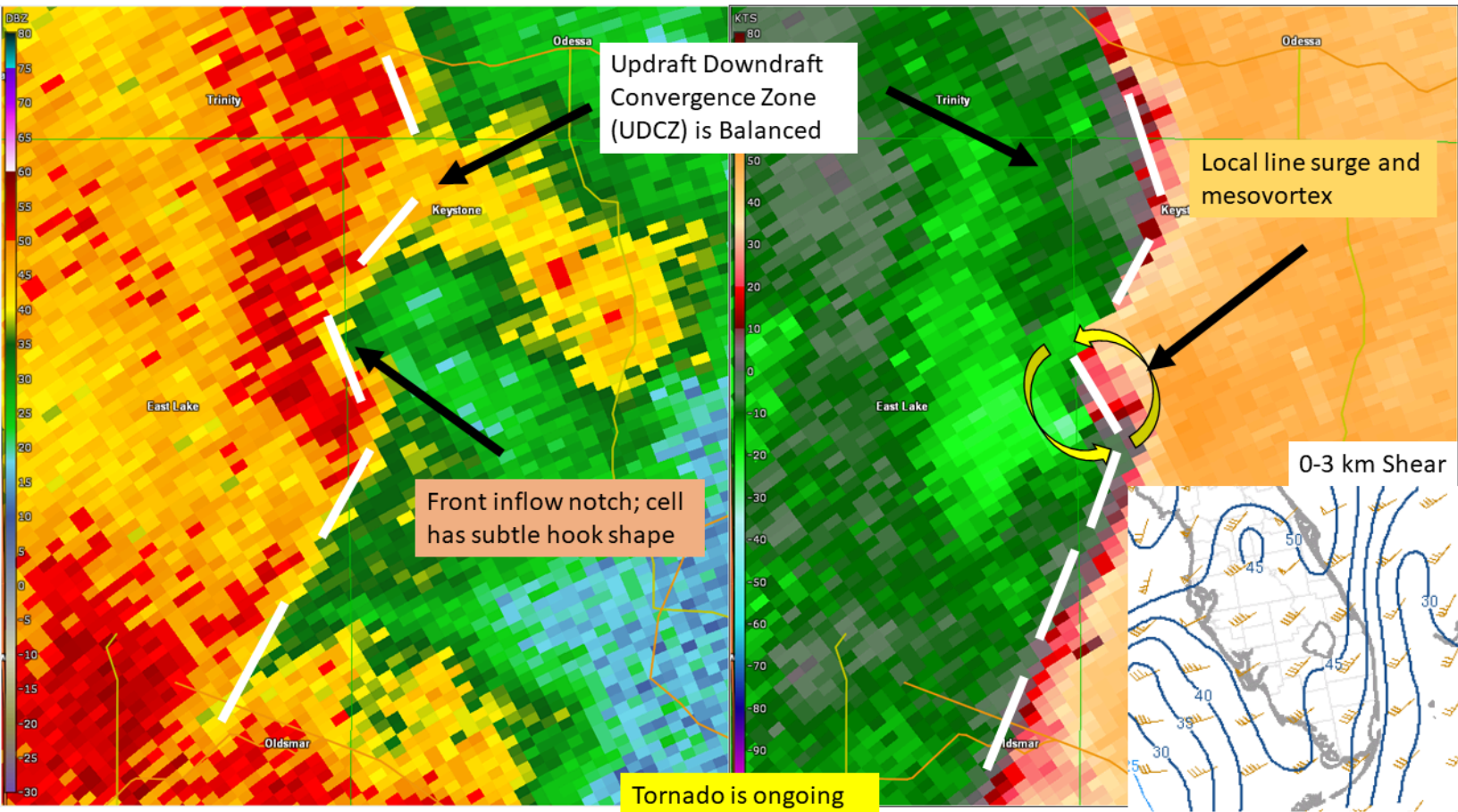
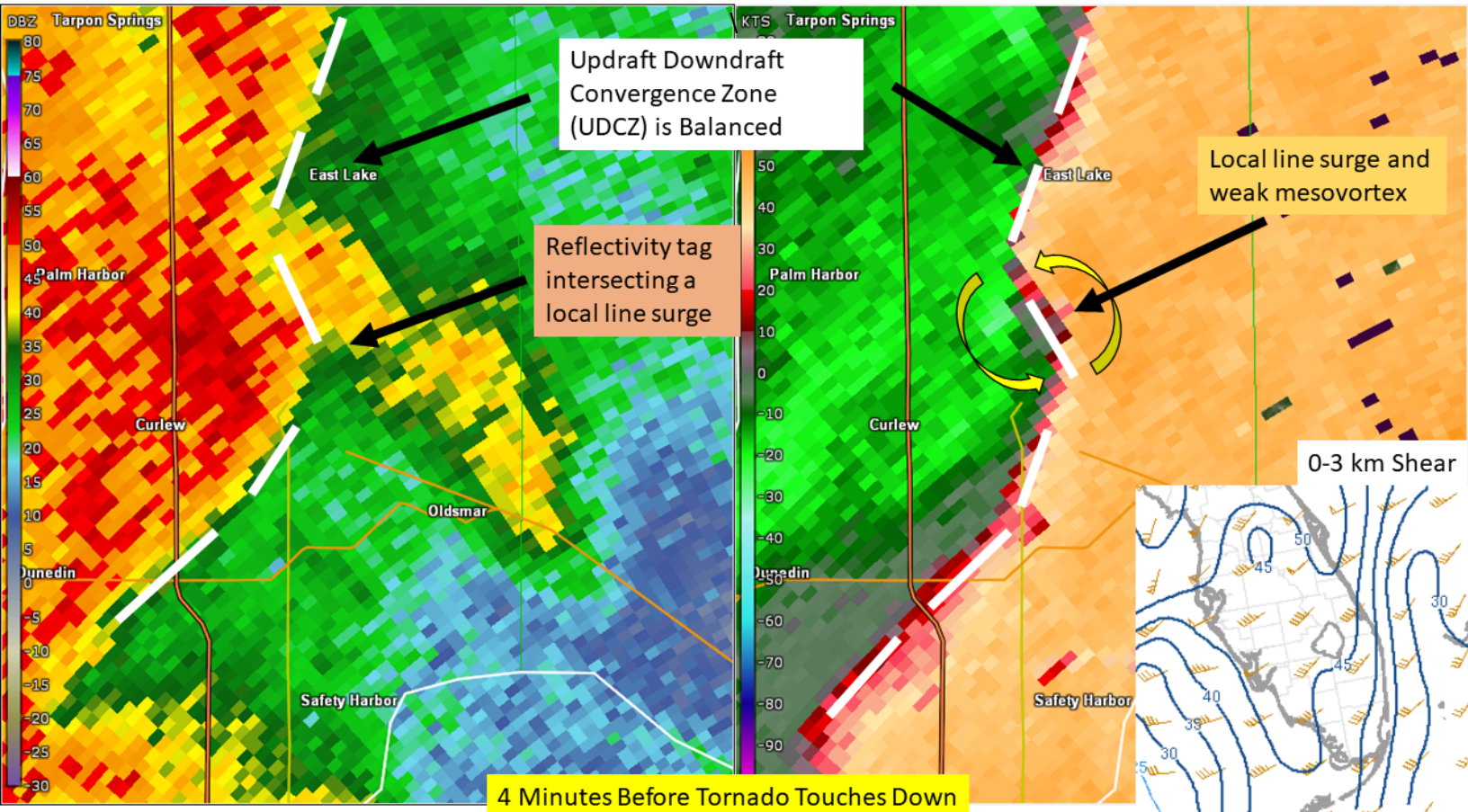
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## Significant Weather Impacts - Tornadoes

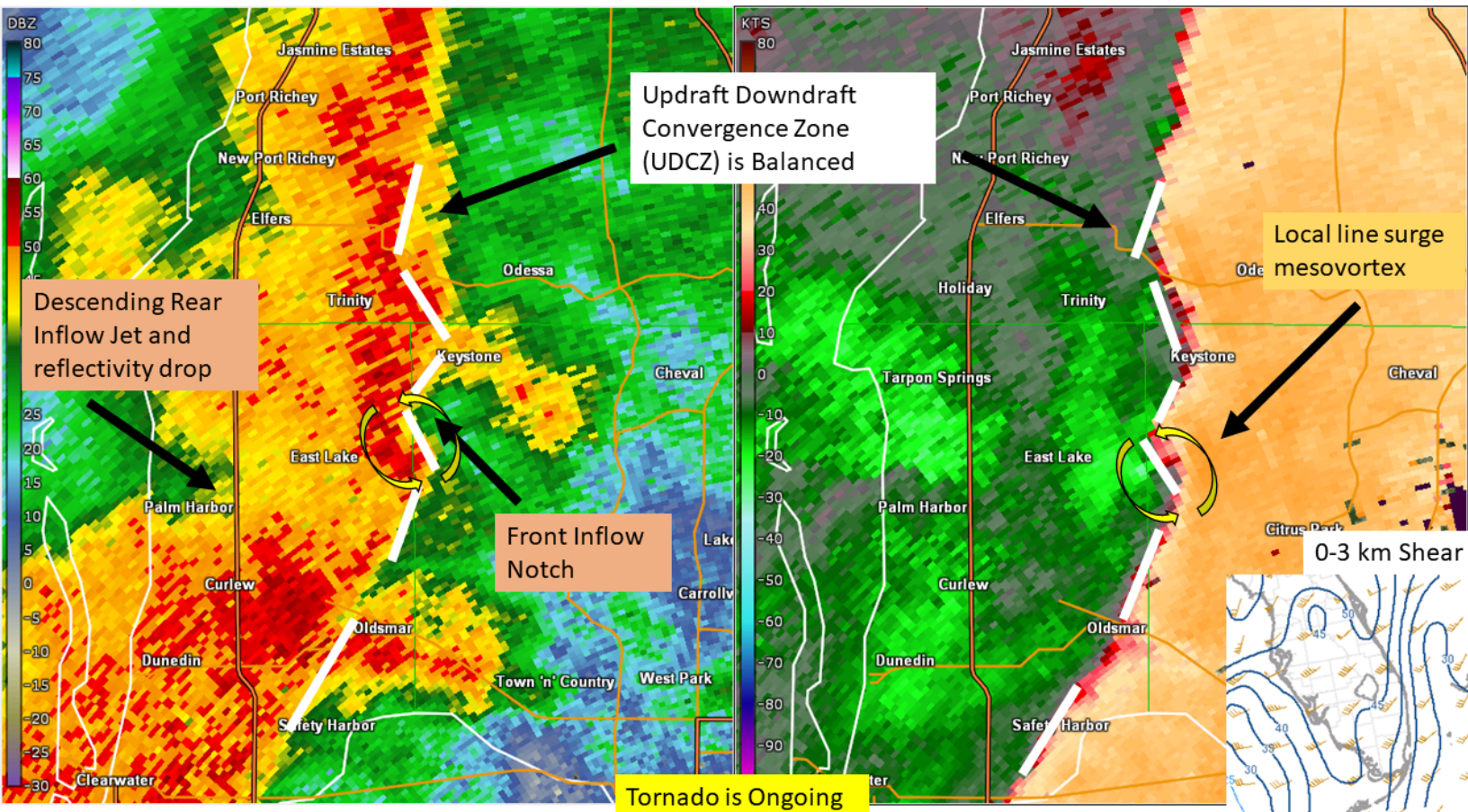
As the line of storms moved through, two tornadoes developed, one in Hillsborough County and one in Pinellas County. These tornadoes were rated an EF-1 and EF-0 respectively.

### Odessa Tornado

The following are some annotated radar images from just before and during the time where the first tornado occurred in Odessa, Florida. For wintertime squall-line events, Meteorologists employ a methodology known as the “three-ingredients” method. If certain features are noted in a favorable environment, Meteorologists will issue a tornado warning for that segment of the line. An important note: strong rotation may not be present when a warning is issued.







 NATIONAL WEATHER SERVICE TAMPA BAY  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

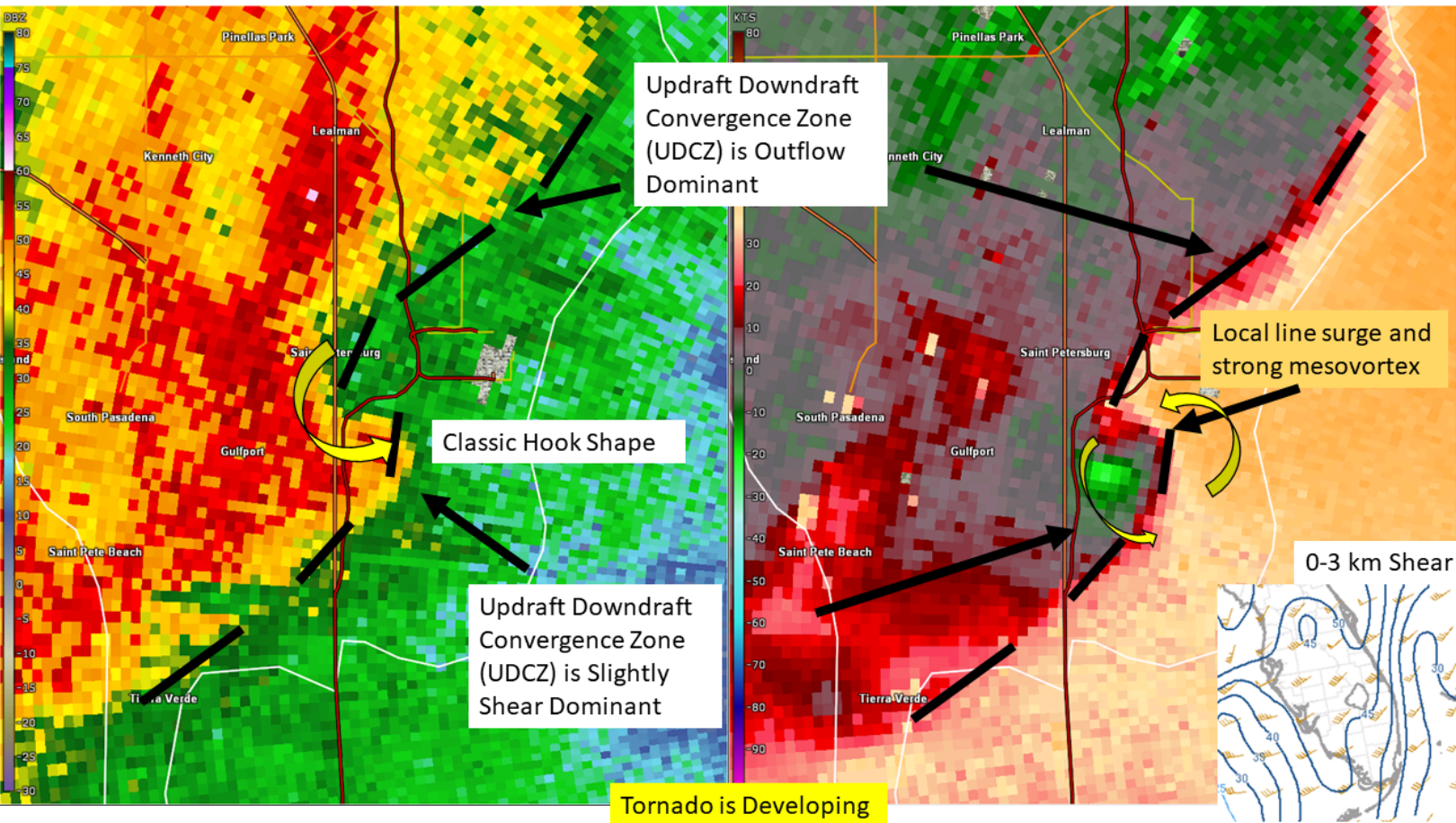
 **Preliminary  
Damage Survey Results**

| Odessa Tornado  |            |
|-----------------|------------|
| Date            | 01/09/2024 |
| Time (Local)    | 4:00 PM    |
| EF Rating       | EF-1       |
| Est. Peak Wind  | 90 MPH     |
| Path Length     | 0.61 miles |
| Max Width       | 75 yards   |
| Deaths/Injuries | 0 / 0      |



## St. Petersburg Tornado

A second tornado occurred a few minutes later just south of Downtown St. Petersburg. Despite a clear signature on radar, This was a very brief tornado with a small damage path.





NATIONAL WEATHER SERVICE TAMPA BAY  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

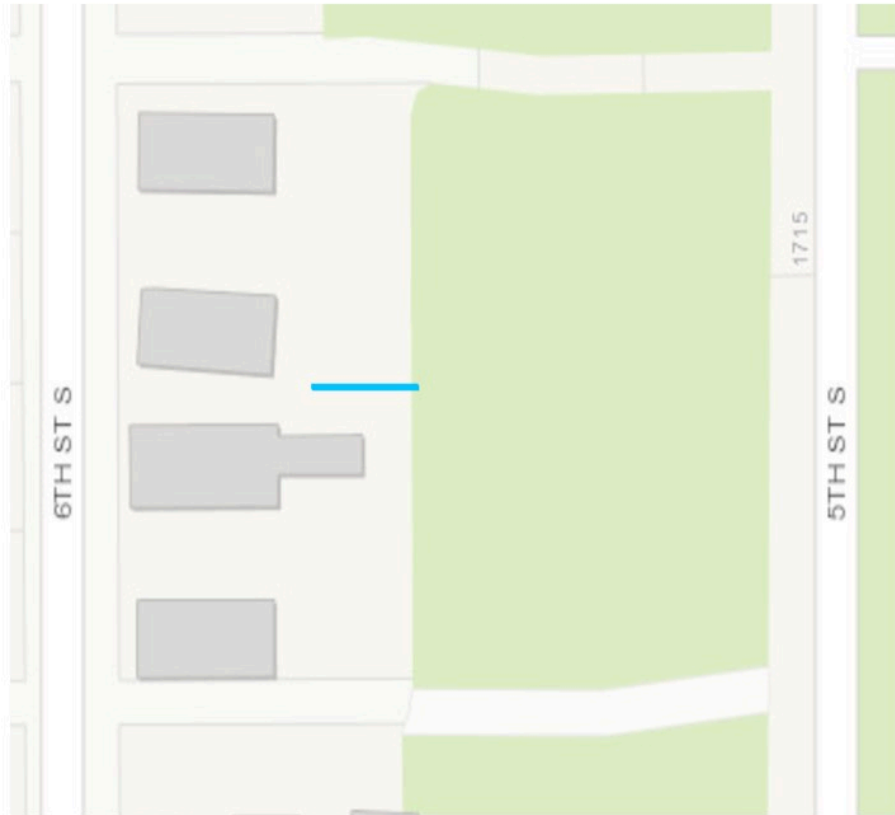


## Preliminary Damage Survey Results

### St. Petersburg Tornado

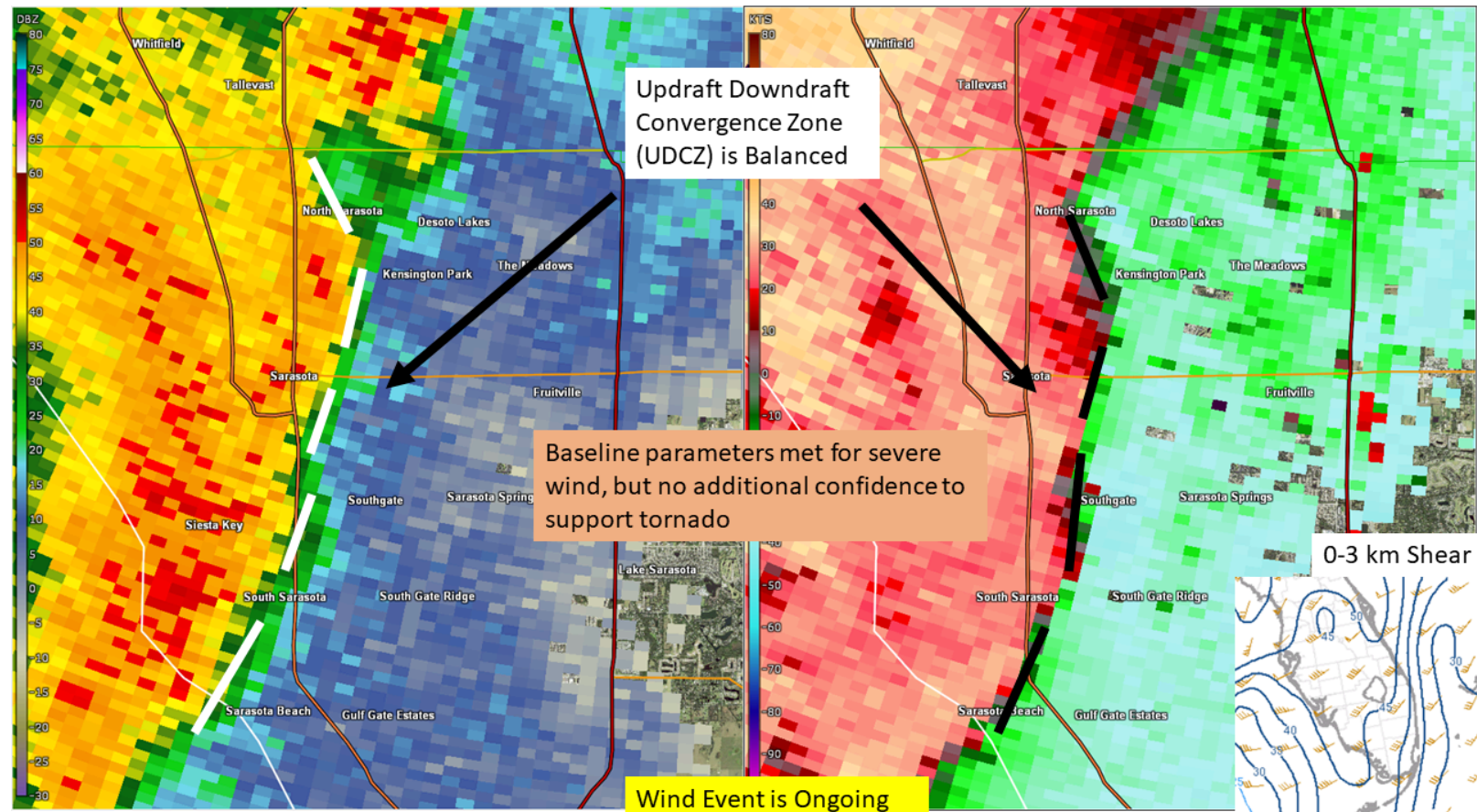
|                 |            |
|-----------------|------------|
| Date            | 01/09/2024 |
| Time (Local)    | 4:23 PM    |
| EF Rating       | EF-0       |
| Est. Peak Wind  | 82 MPH     |
| Path Length     | 0.01 miles |
| Max Width       | 10 yards   |
| Deaths/Injuries | 0 / 0      |

ISSUED: 4:00 PM Thursday, January 11, 2024



### Significant Weather Impacts - Straight-Line Winds

In addition to the two tornadoes, a straight-line wind event occurred in Sarasota County, Florida. Peak winds of 75 mph caused damage in the Fruitville area just east of Interstate-75. Unlike the other tornadoes, the baseline conditions were met for a severe thunderstorm warning, but the line lacked additional concerning features to warrant a tornado warning. The post-event survey revealed damaging straight-line winds, but not a tornado.

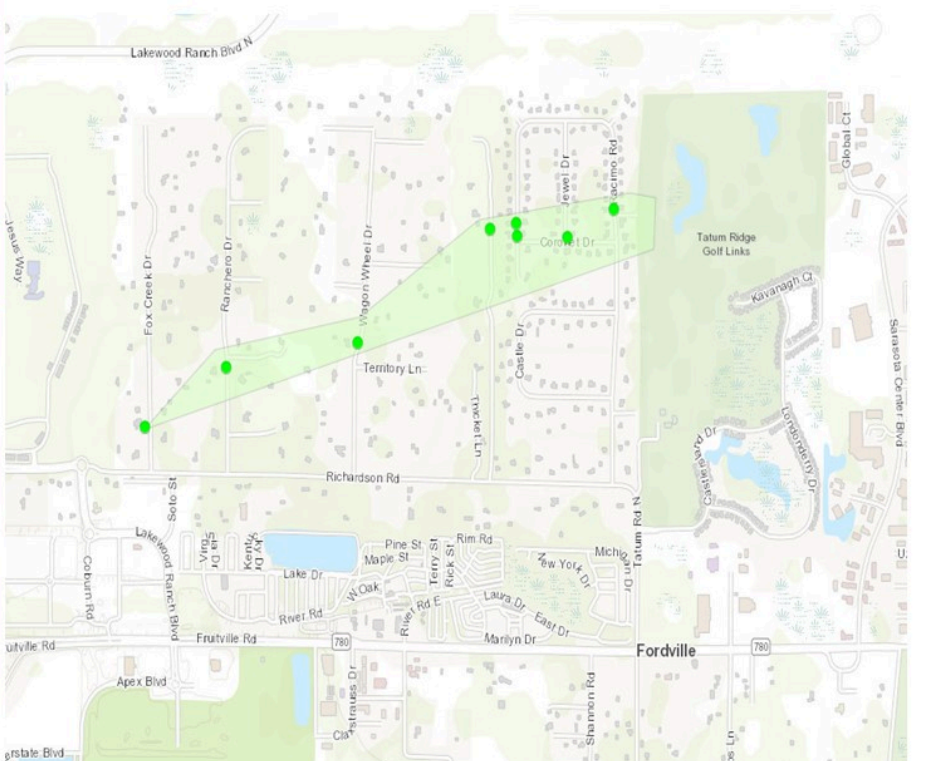


**NATIONAL WEATHER SERVICE TAMPA BAY**  
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

**SEVERE** Preliminary  
 Damage Survey Results

**Fruitville Straight-Line Winds**

|                 |            |
|-----------------|------------|
| Date            | 01/09/2024 |
| Time (Local)    | 5:09 PM    |
| Est. Peak Wind  | 75 MPH     |
| Path Length     | 1.47 miles |
| Max Width       | 370 yards  |
| Deaths/Injuries | 0 / 0      |



000  
NOUS42 KTBW 112054  
PNSTBW  
FLZ050-149-151-155-160-249-251-255-260-120900-

### Public Information Statement

National Weather Service Tampa Bay Ruskin FL  
354 PM EST Thu Jan 11 2024

...[NWS](#) Damage Survey for 01/09/2024 [Tornado](#) and Straight-Line Wind Event...

.Update...This [report adds](#) more detailed times and path lengths. Also, more accurate location names have been added as well.

.Overview...A line of storms moved across the Florida peninsula during the afternoon and evening of January 09. From this line of storms, two tornadoes occurred in West Central and Southwest Florida, along with a significant area of [straight-line winds](#) in Sarasota County, FL.

.Odessa [Tornado](#)...

Rating: EF1  
Estimated Peak Wind: 90 mph  
Path Length /statute/: 0.61 miles  
Path Width /maximum/: 75 yards  
Fatalities: 0  
Injuries: 0

Start Date: 01/09/2024  
Start Time: 04:00 PM EST  
Start Location: 4 NW Westchase / Hillsborough County / FL  
Start [Lat](#)/Lon: 28.1061 / -82.6458

End Date: 01/09/2024  
End Time: 04:02 PM EST  
End Location: 4 NNW Westchase / Hillsborough County / FL  
End [Lat](#)/Lon: 28.109 / -82.6369

Survey Summary: A detailed survey of the neighborhood was conducted. The main [tornado](#) path appeared to track across a Golf Course, with the most

notable structure damage being the detachment/collapse of several [pool](#) cages [backing](#) up to the golf course. There was some additional roof and tree damage along an adjacent street. However, this appeared to be associated with inflow and/or an eventual [microburst](#) with a uniform direction to the damage along that street.

Along the path, there were a couple pockets of EF-1 damage. However, most of the surveyed damage was EF-0.

.St. Petersburg [Tornado](#)...

Rating: EF0  
Estimated Peak Wind: 82 mph  
Path Length /statute/: 0.01 miles  
Path Width /maximum/: 10 yards  
Fatalities: 0  
Injuries: 0

Start Date: 01/09/2024  
Start Time: 05:23 PM EDT  
Start Location: W Albert Whitted Airport / Pinellas County / FL  
Start [Lat](#)/Lon: 27.7528 / -82.6401

End Date: 01/09/2024  
End Time: 05:23 PM EDT  
End Location: W Albert Whitted Airport / Pinellas County / FL  
End [Lat](#)/Lon: 27.7528 / -82.64

Survey Summary:

A [NWS Meteorologist](#) surveyed the area and found damage to a single structure. There was a partial loss of roof covering material (less than 20%) justifying a [peak wind speed](#) of 82 mph. Just west of the building were parked cars, trees, and a telephone poll with no damage. However, roof covering material was found deposited in this area. No other visible damage could be found in the vicinity.

.Fruitville Straight-Line Wind Event...

Peak Wind /E/: 75 mph

Path Length /statute/: 1.47 miles  
Path Width /maximum/: 370 yards  
Fatalities: 0  
Injuries: 0

Start Date: 01/09/2024  
Start Time: 5:09PM  
Start Location: Sarasota, FL  
Start [Lat](#)/Lon: 27.3446/-82.4382

End Date: 01/09/2024  
End Time: 5:13PM  
End Location: Sarasota, FL  
End [Lat](#)/Lon: 27.3531/-82.4165

Survey Summary: Several communities just north of Fruitville Road in Sarasota area were surveyed, with evidence of a significant straight-line wind event occurring in the area. The primary damage was to trees, but several structures towards the end of the path did have some damage mainly to siding. Unlike tornadoes, the path was significantly wider, longer, and all damage was found in a uniform direction, implying the area experienced a local wind [surge](#) rather than a [tornado](#).

&&

EF Scale: The Enhanced [Fujita Scale](#) classifies tornadoes into the following categories:

EF0.....65 to 85 mph  
EF1.....86 to 110 mph  
EF2.....111 to 135 mph  
EF3.....136 to 165 mph  
EF4.....166 to 200 mph  
EF5.....>200 mph

NOTE:

The information in this statement is preliminary and subject to change pending final review of the events and publication in [NWS Storm Data](#).