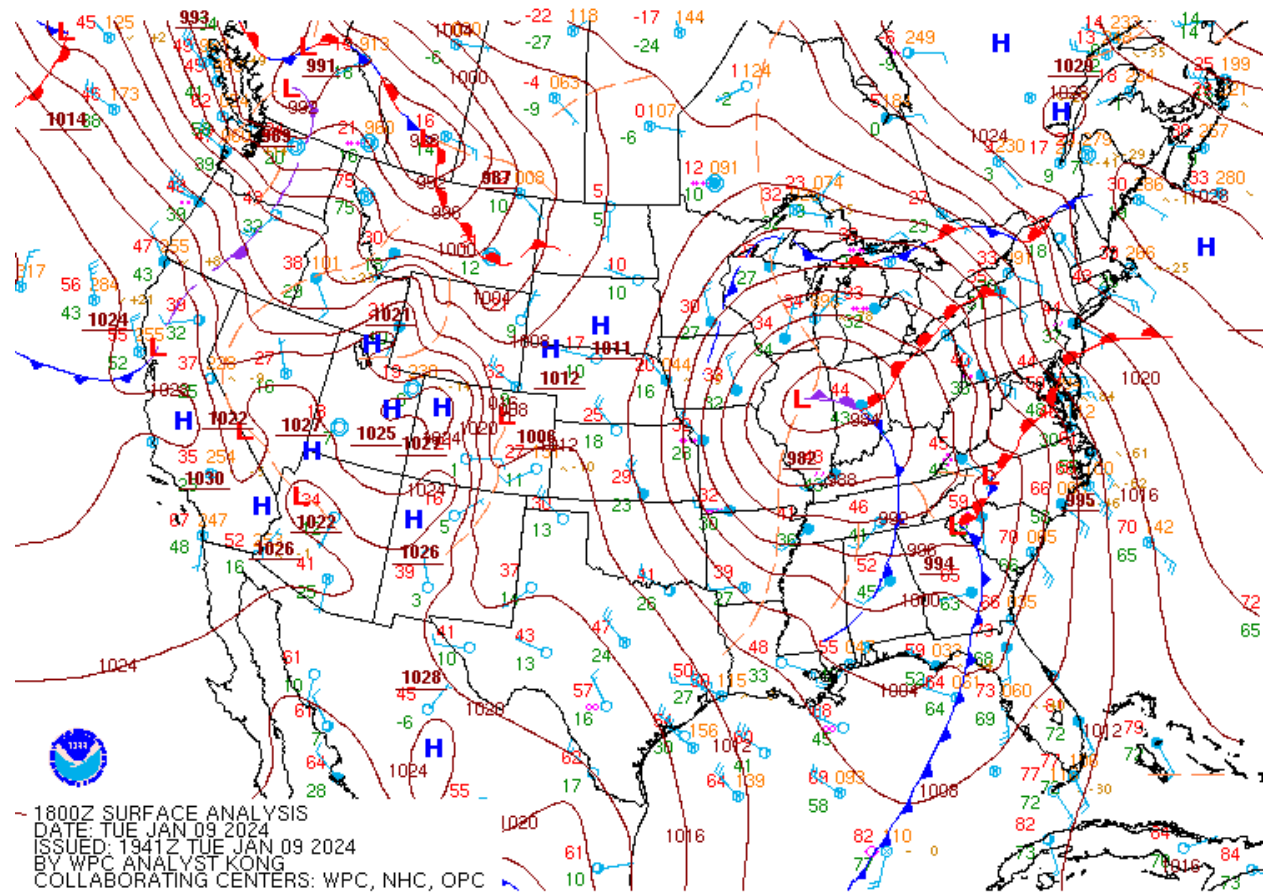


# January 09, 2024 Severe Weather Event

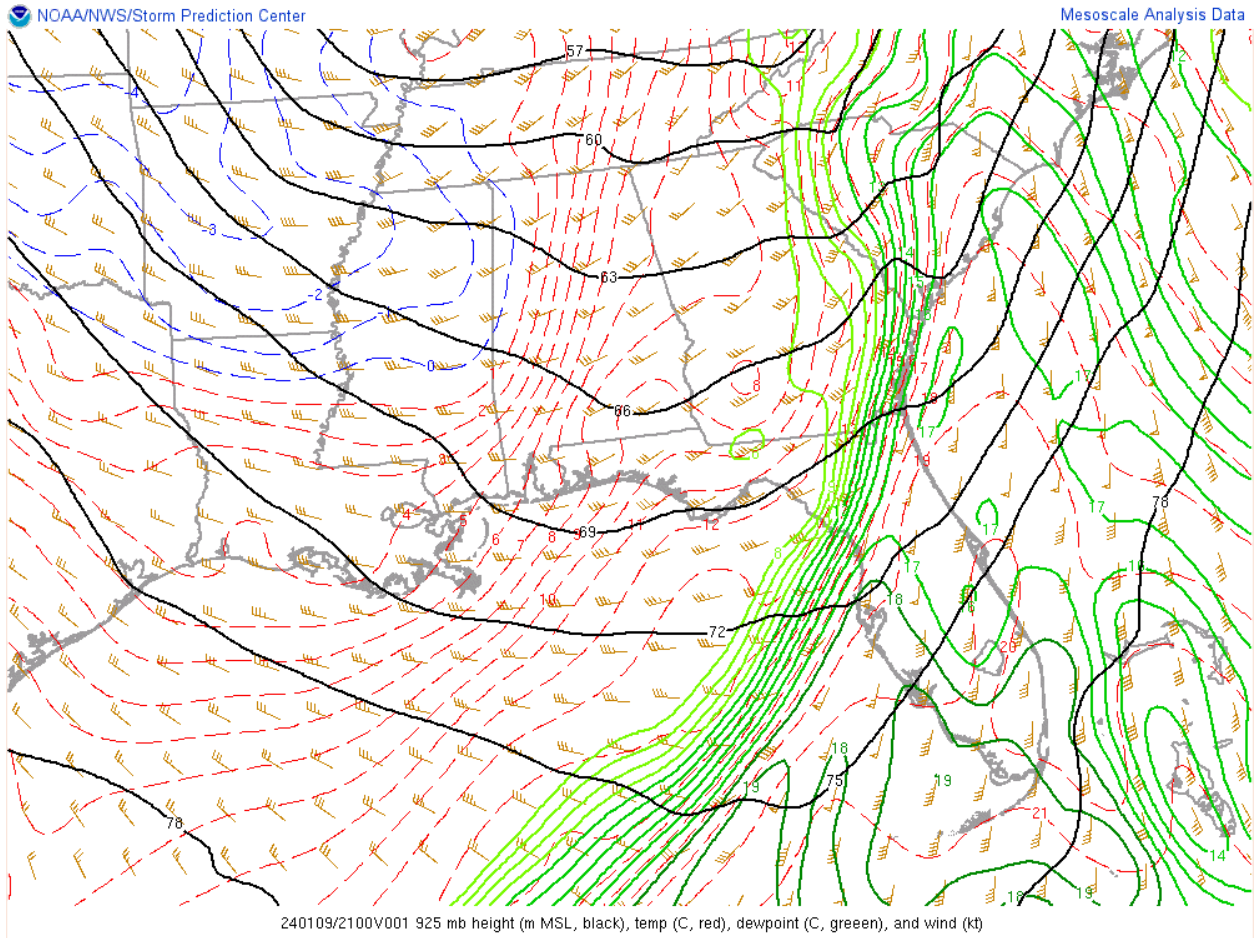
On January 09, 2024 a potent storm system moved across the Florida peninsula. As the storm system approached, a warm and humid air mass lifting northward over the state produced strong winds not associated with any storms. Just ahead of the cold front, a squall line pushed through the region producing 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.

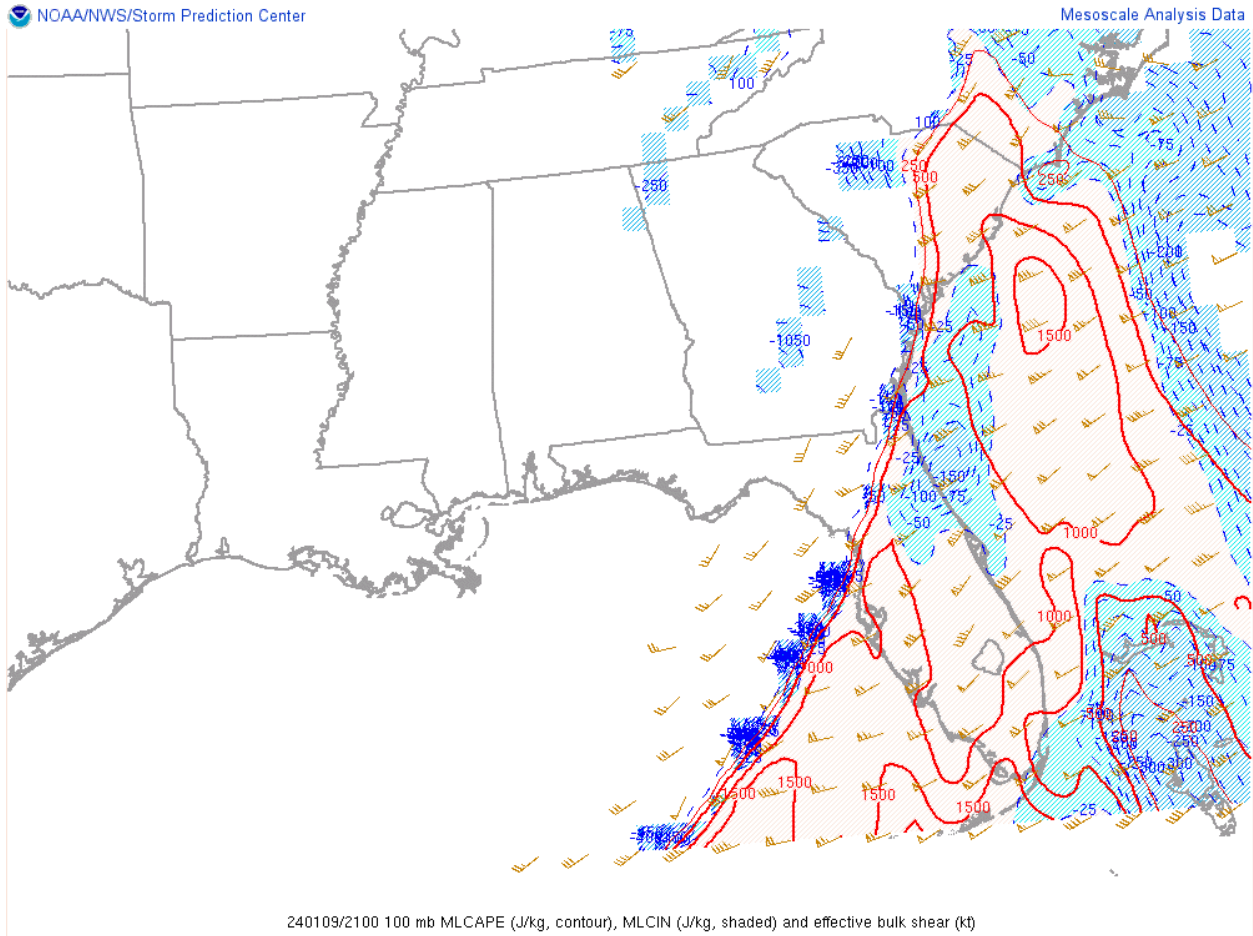


WPC 18Z Surface Analysis from January 09, 2024



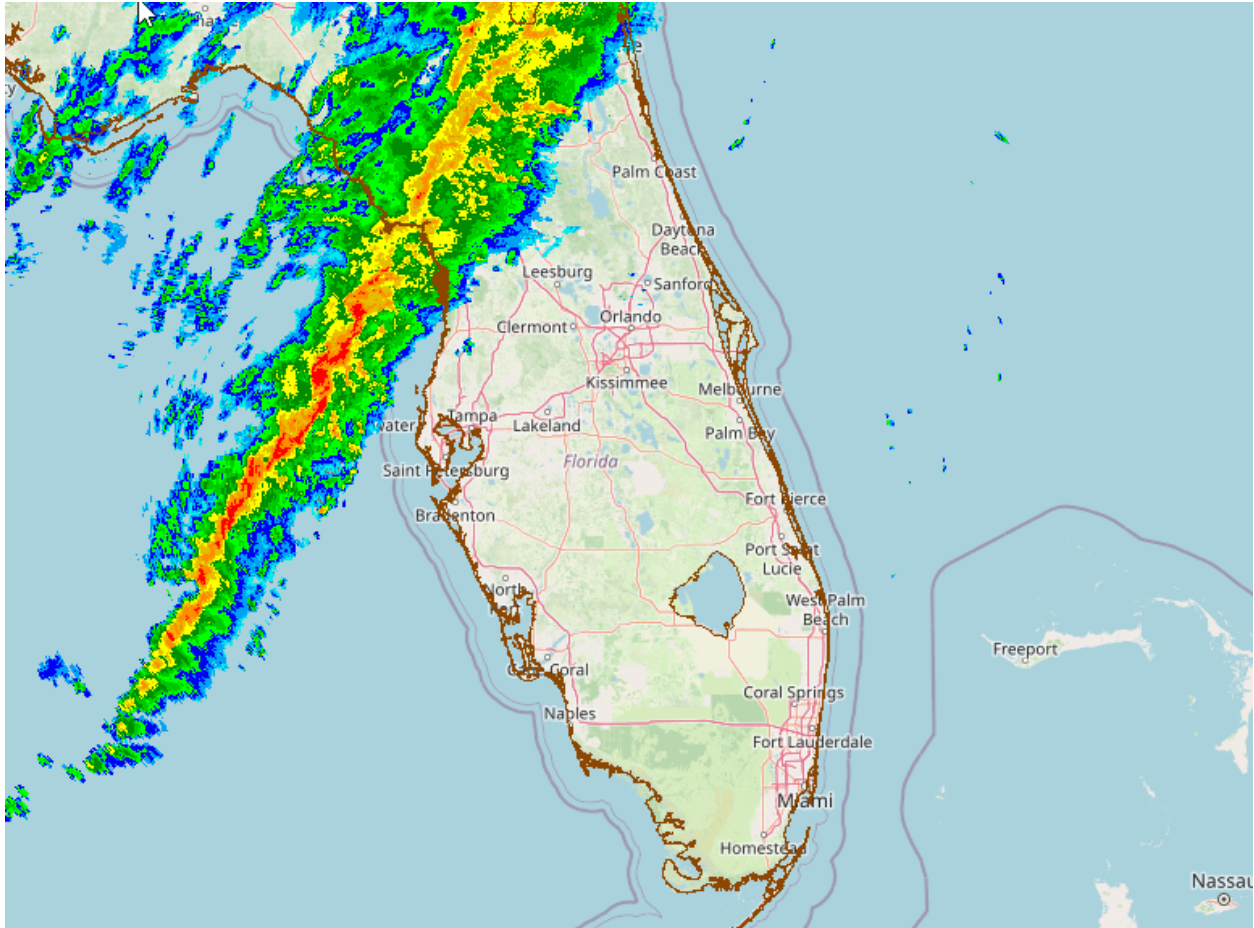
925 mb Analysis from SPC Mesoanalysis Archive - Jan 09, 2024

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
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...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.

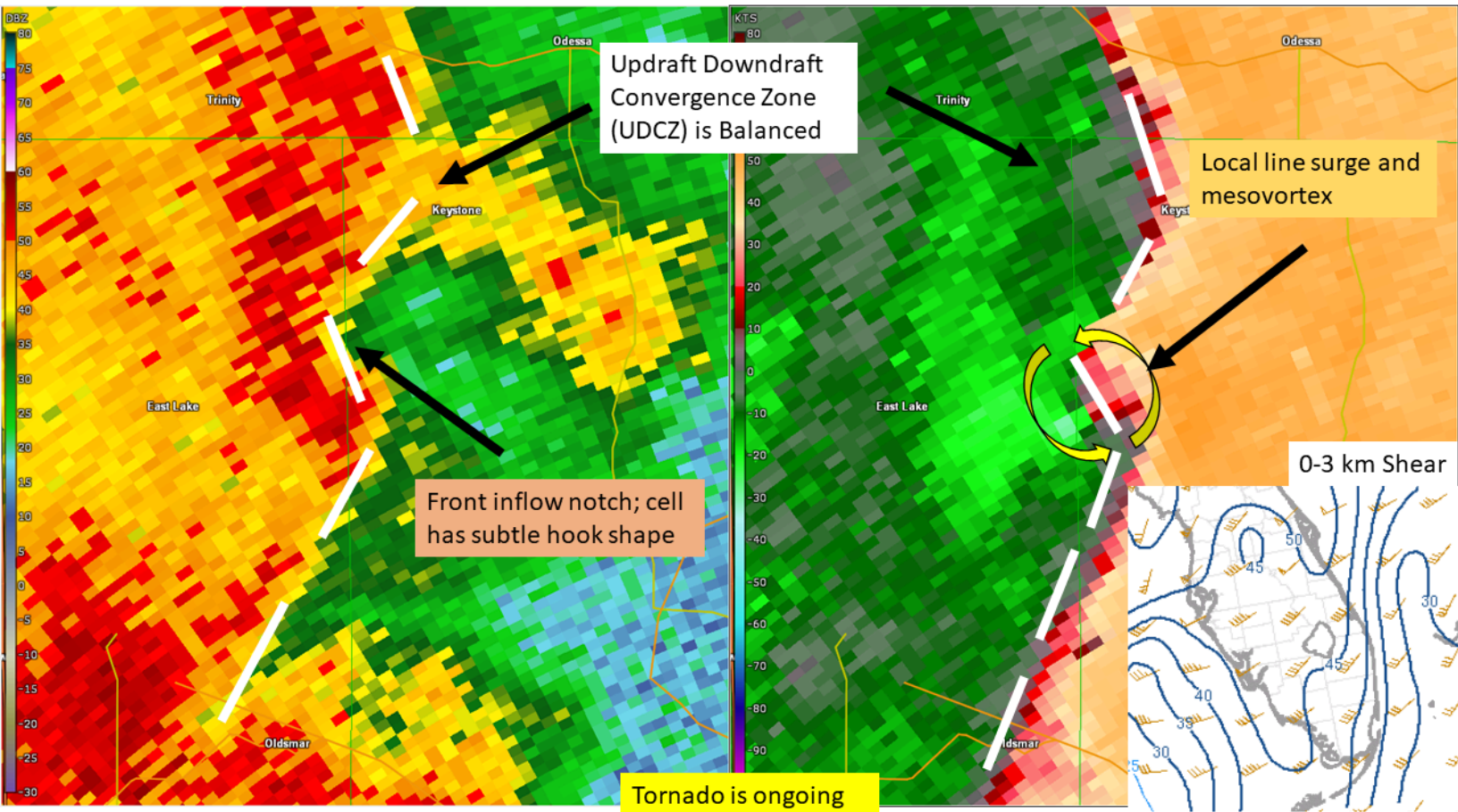
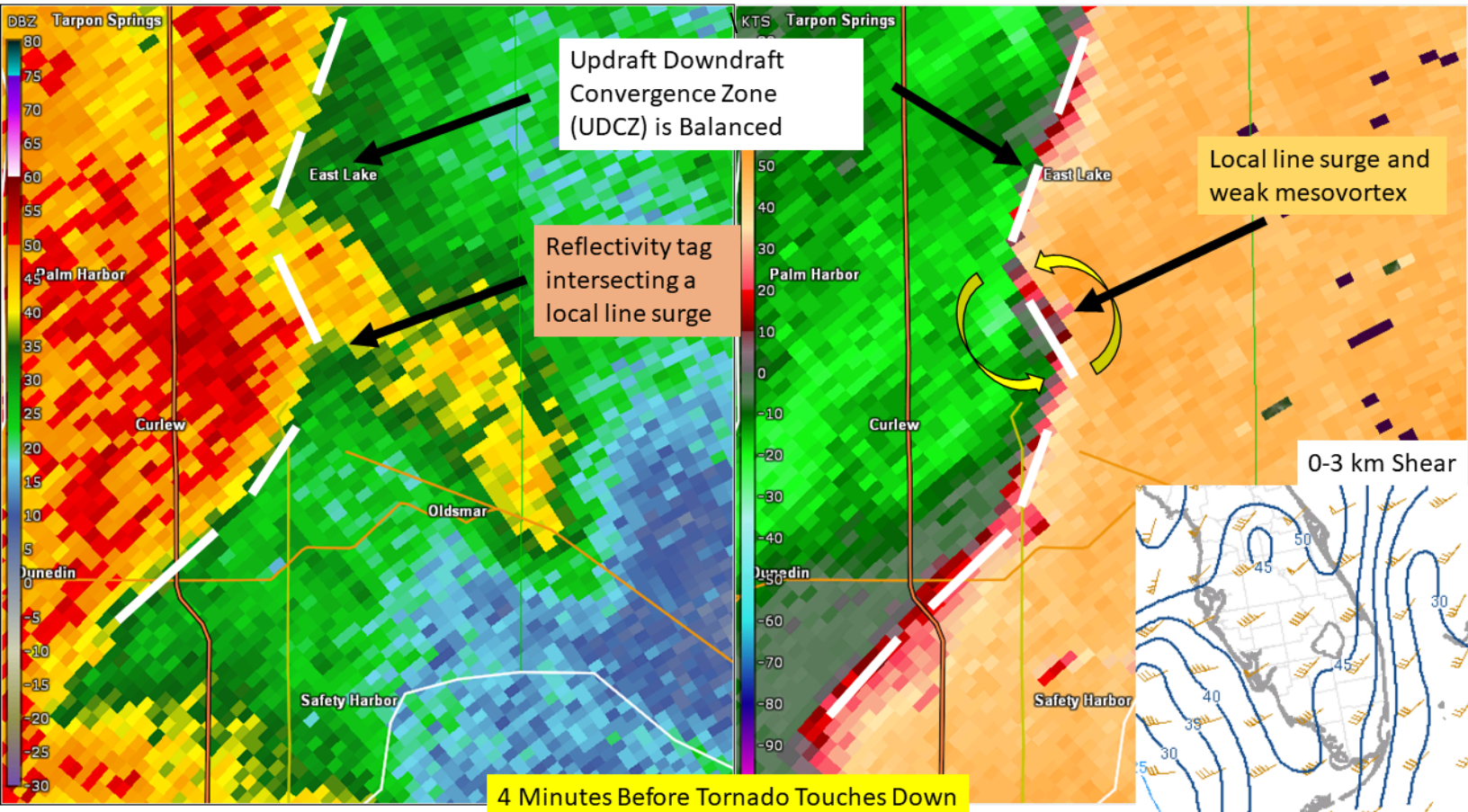
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## Significant Weather Impacts - Tornadoes

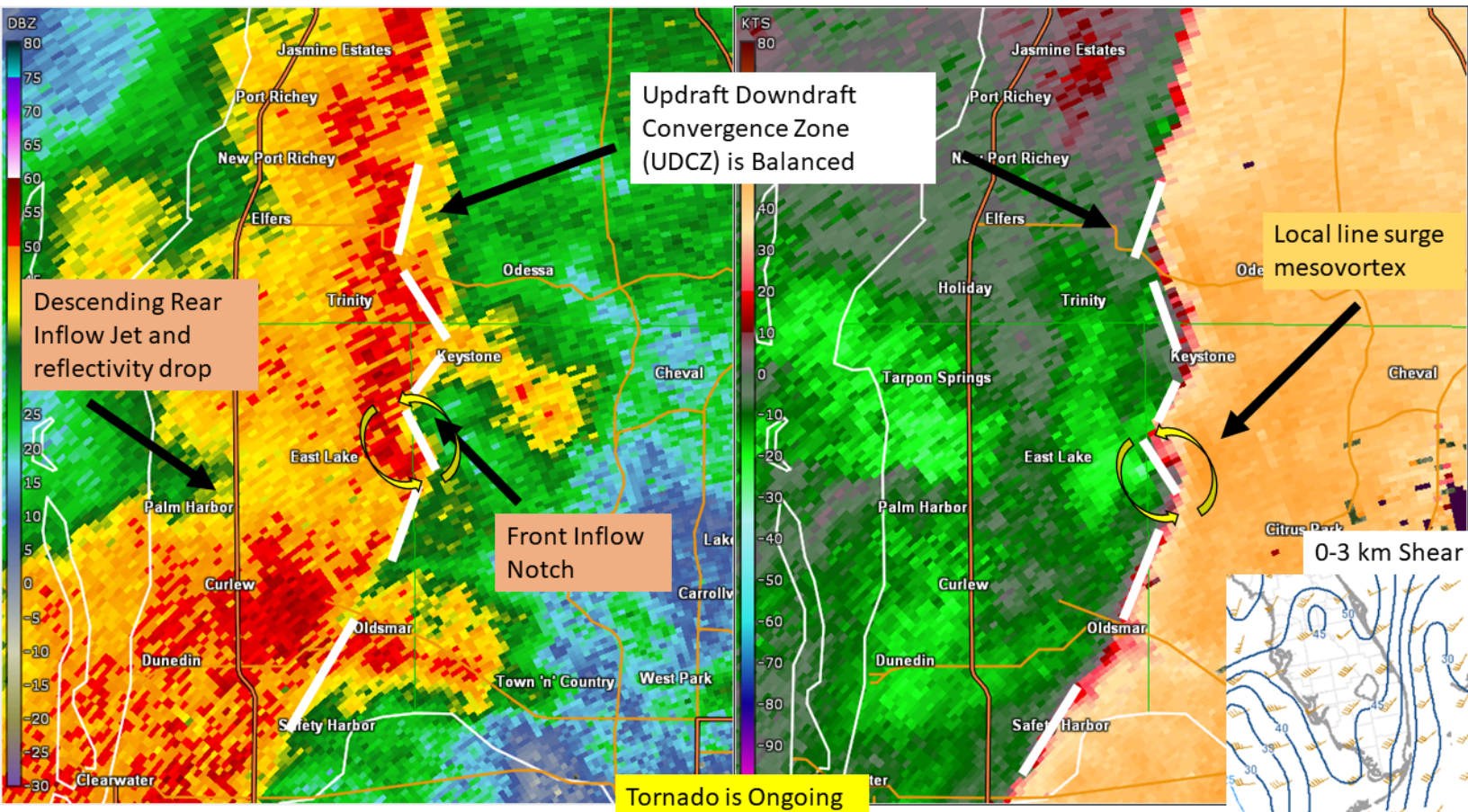
As the line of storms moved through, two tornadoes developed, one in Hillsborough County and one in Pinellas County. These tornadoes were rated an EF-1 and EF-0 respectively.

### 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

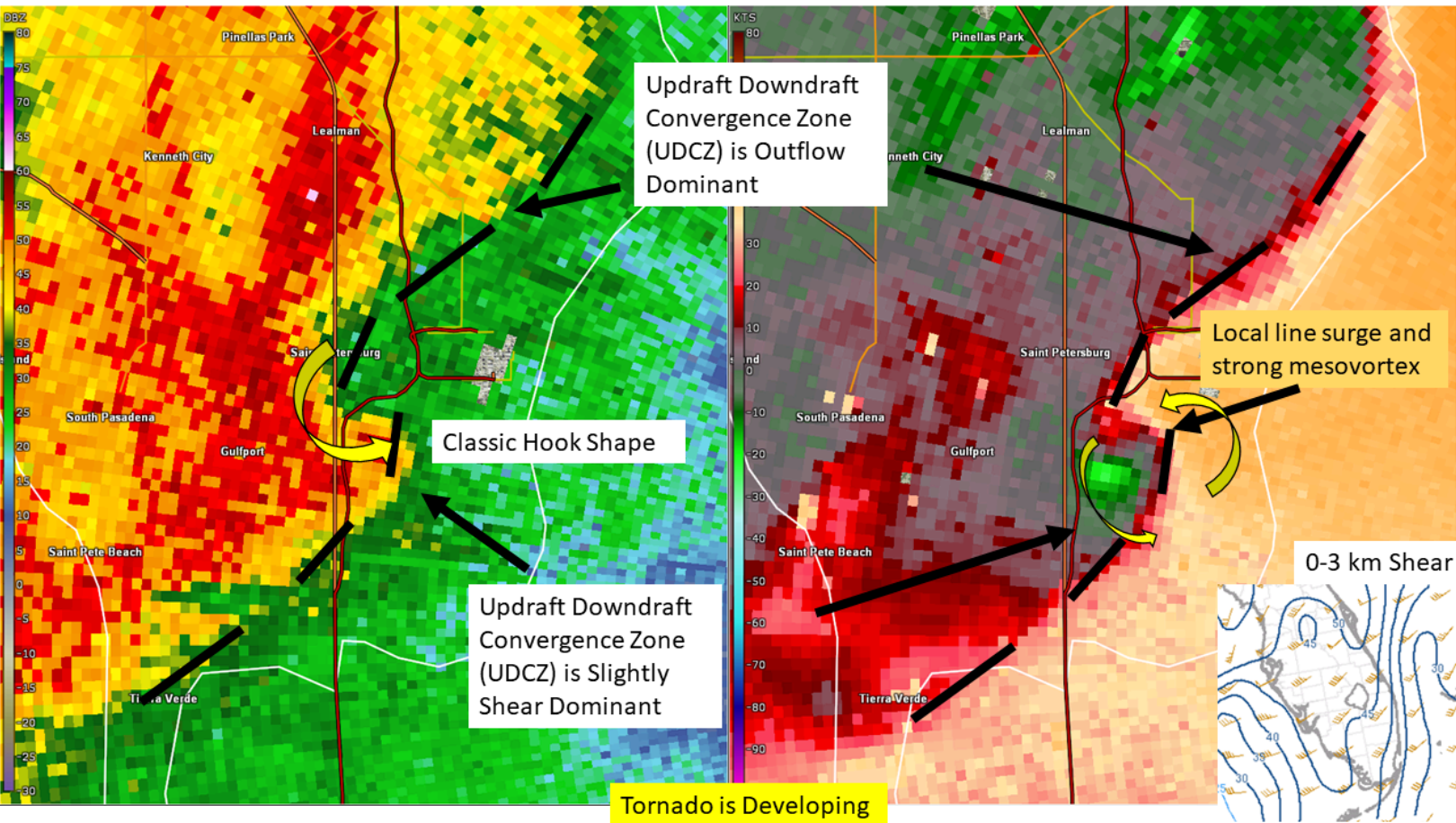
 **Preliminary  
Damage Survey Results**

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

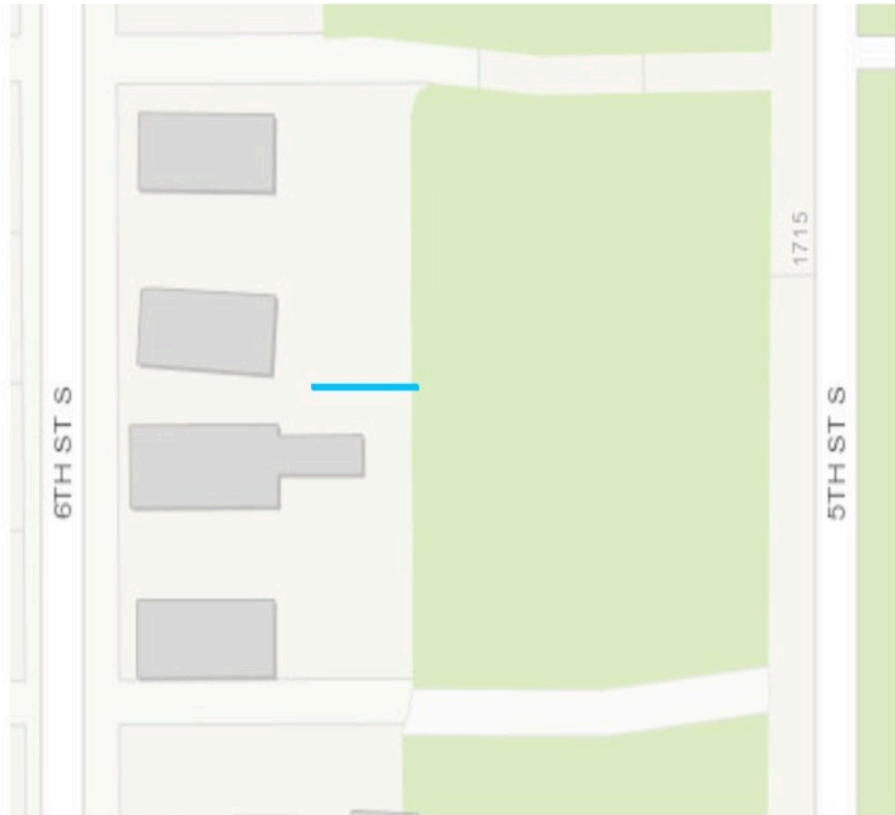


## Preliminary Damage Survey Results

### St. Petersburg Tornado

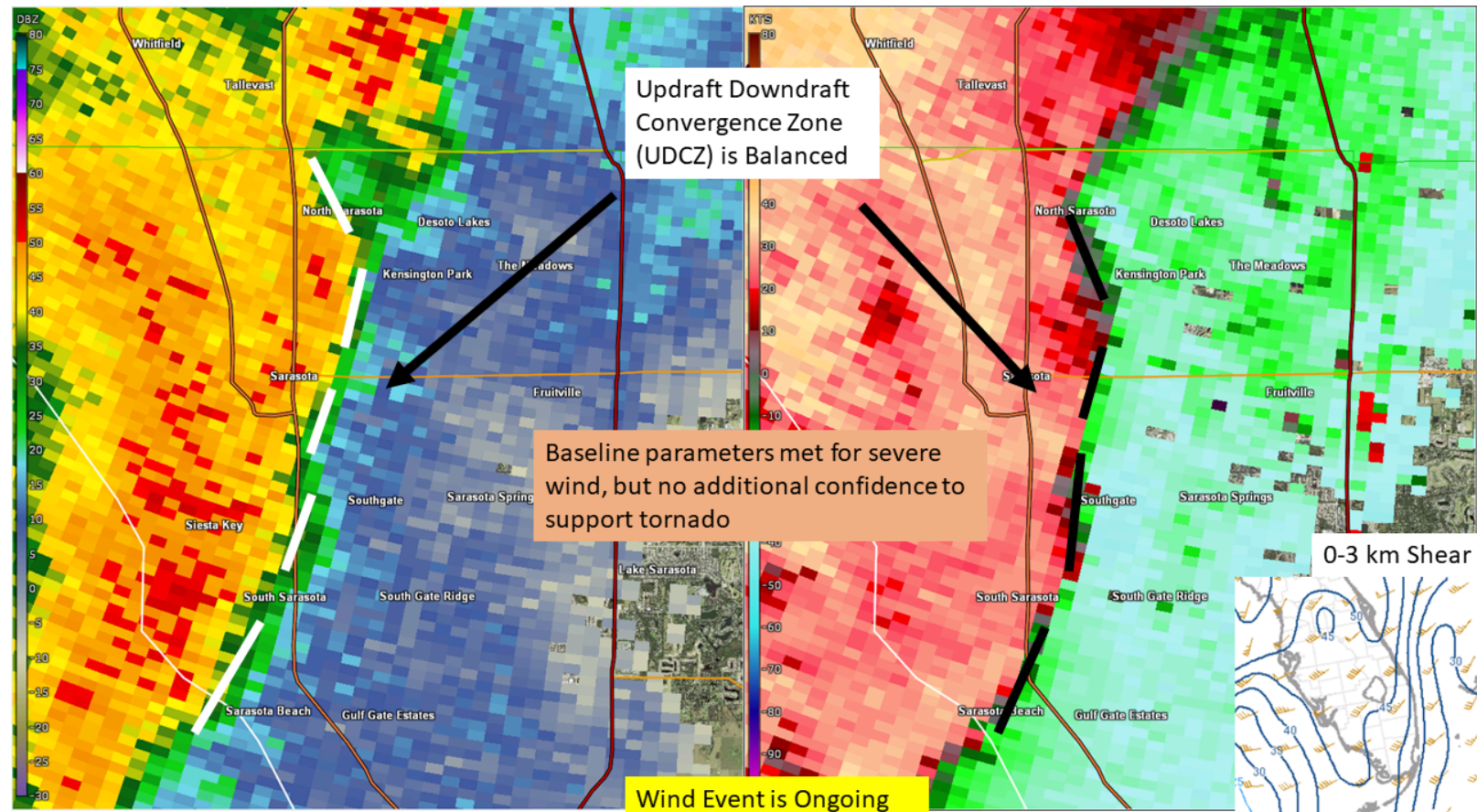
Date	01/09/2024
Time (Local)	4:23 PM
EF Rating	EF-0
Est. Peak Wind	82 MPH
Path Length	0.01 miles
Max Width	10 yards
Deaths/Injuries	0 / 0

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.

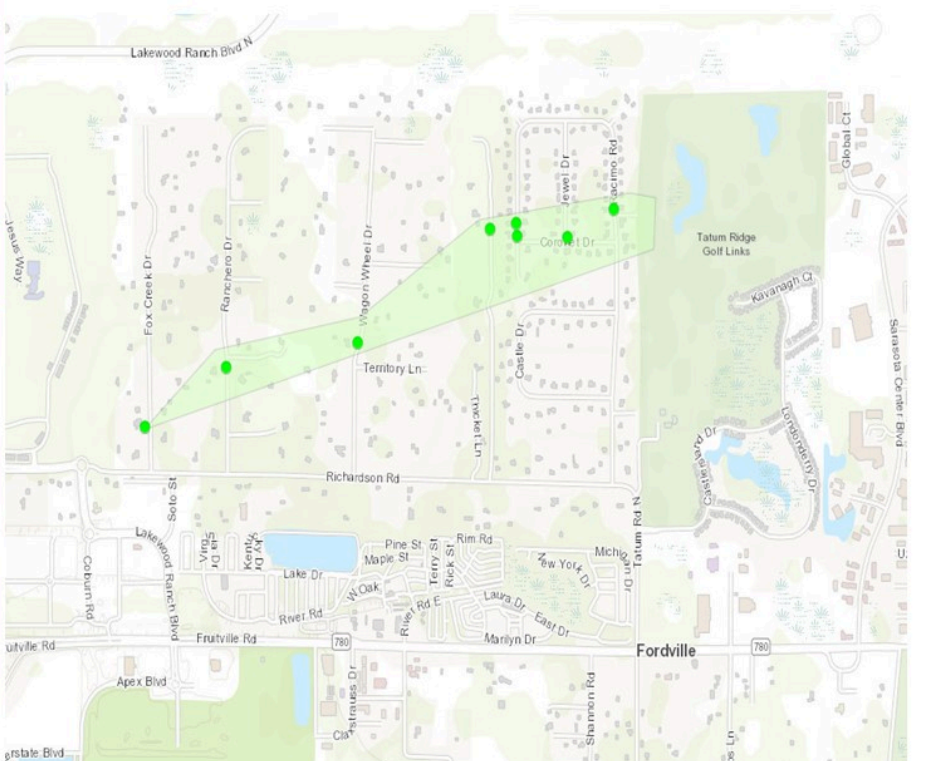


**NATIONAL WEATHER SERVICE TAMPA BAY**  
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

**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



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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](#).