

April 11, 2021
Central Florida Squall Line
Winter Park-Oviedo Large Hail Event & Treasure Coast Intense Wind Event

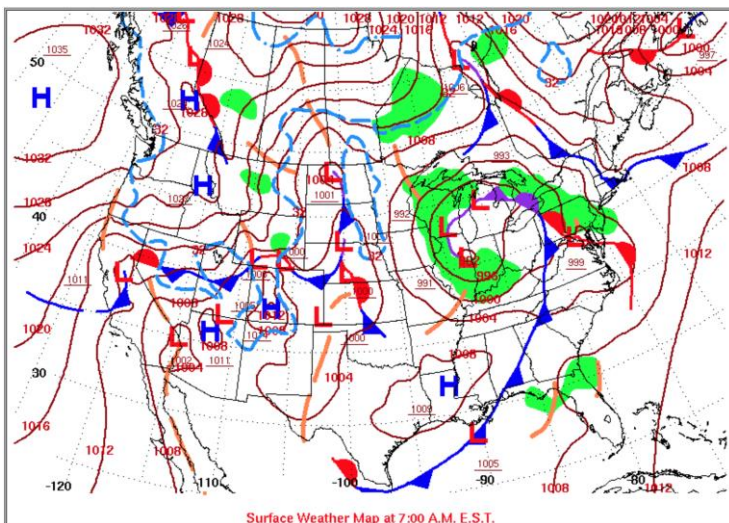
Event Summary

Two distinct severe weather threats developed during the morning and the afternoon on April 11, 2021. NWS Melbourne, along with other Florida NWS offices, coordinated with the Storm Prediction Center (SPC) to issue a Severe Thunderstorm Watch for most of the northern and central Florida peninsula from 8 AM to 4 PM.

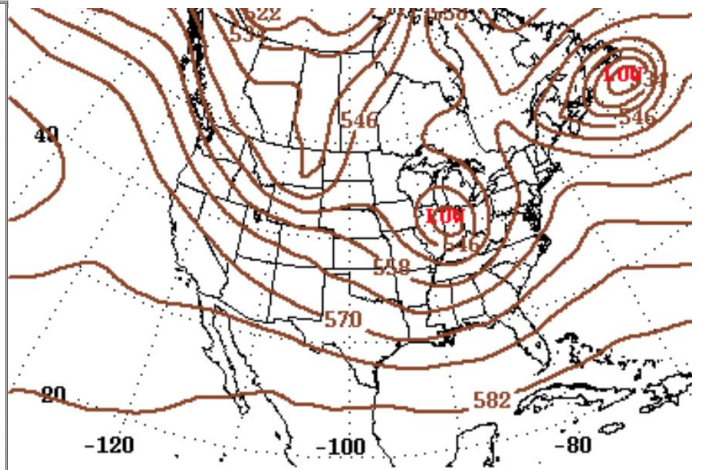
Initially, several rounds of strong thunderstorms moved across the Interstate 4 Corridor just after sunrise through the late morning. One of these storms quickly became severe, and produced hail from the Winter Park/Maitland area towards Oviedo. Numerous hail reports ranging from quarter-size (1 inch) to golf ball sized (1.75 inch) were received from trained spotters, local media partners, and the public. The largest hail reported was 2 inches in Oviedo! These storms weakened as they moved into Volusia County, though they were still strong enough to produce gusty wind and small hail before moving offshore.

At around 11 AM, a line of strong storms moved onshore on the Nature Coast in west-central Florida, eventually reaching the Interstate 4 Corridor just after 12 PM, the Space Coast around 1 PM, then the Treasure Coast by 1:30 PM to 2 PM. As this line of storms crossed the central Florida peninsula the storms grew in size and intensity. This Mesoscale Convective System (MCS) eventually became a well-defined line of storms (a Squall Line) that produced powerful straight-line winds and significant damage along the Treasure Coast.

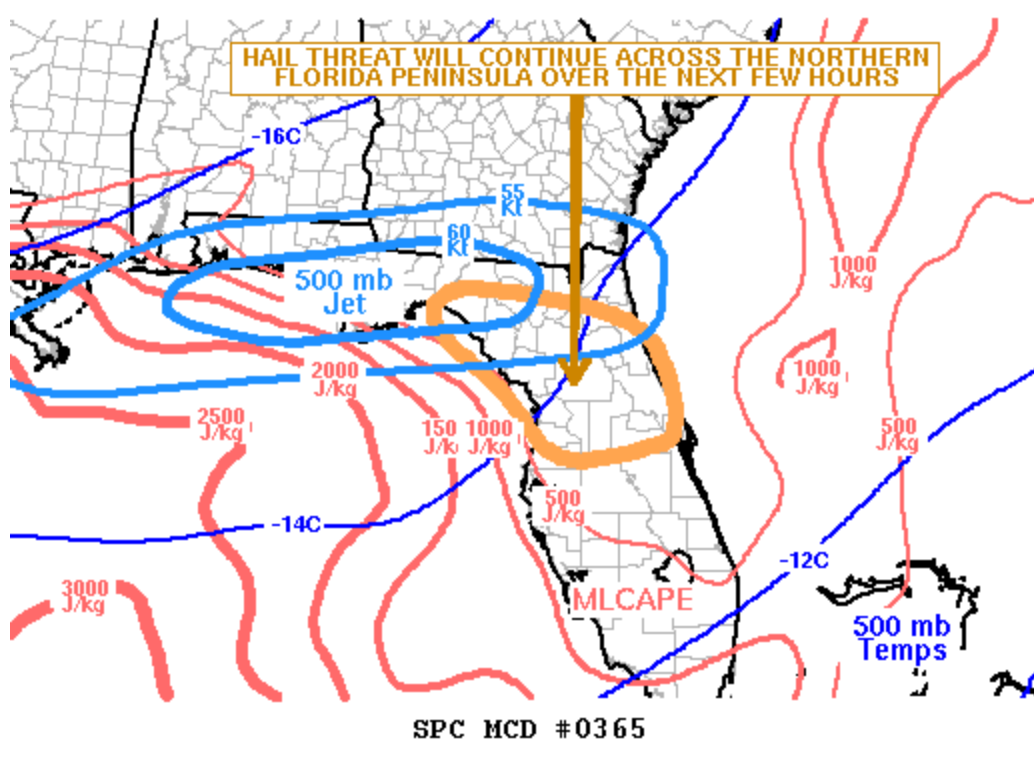
Numerous strong wind gusts between 45-50 mph were observed from Kissimmee to New Smyrna Beach to Melbourne. Severe wind gusts of 60-65 mph occurred along the Indian River and adjacent coast from Malabar (in south Brevard County) to Sebastian Inlet, to Fort Pierce and Hutchinson Island (in Saint Lucie County). As the Squall Line reached peak intensity in Martin County, several wind gusts of 63-71 mph were observed from Stuart to Hobe Sound, with a peak hurricane-force wind gust of 77 mph observed in Jensen Beach. These powerful straight-line winds resulted in numerous large branches downed and several large trees knocked over in Stuart and Hobe Sound. Some homes experienced damage to awnings, pool enclosures, and had backyard items knocked down.



Surface Weather Map at 7:00 A.M. E.S.T.



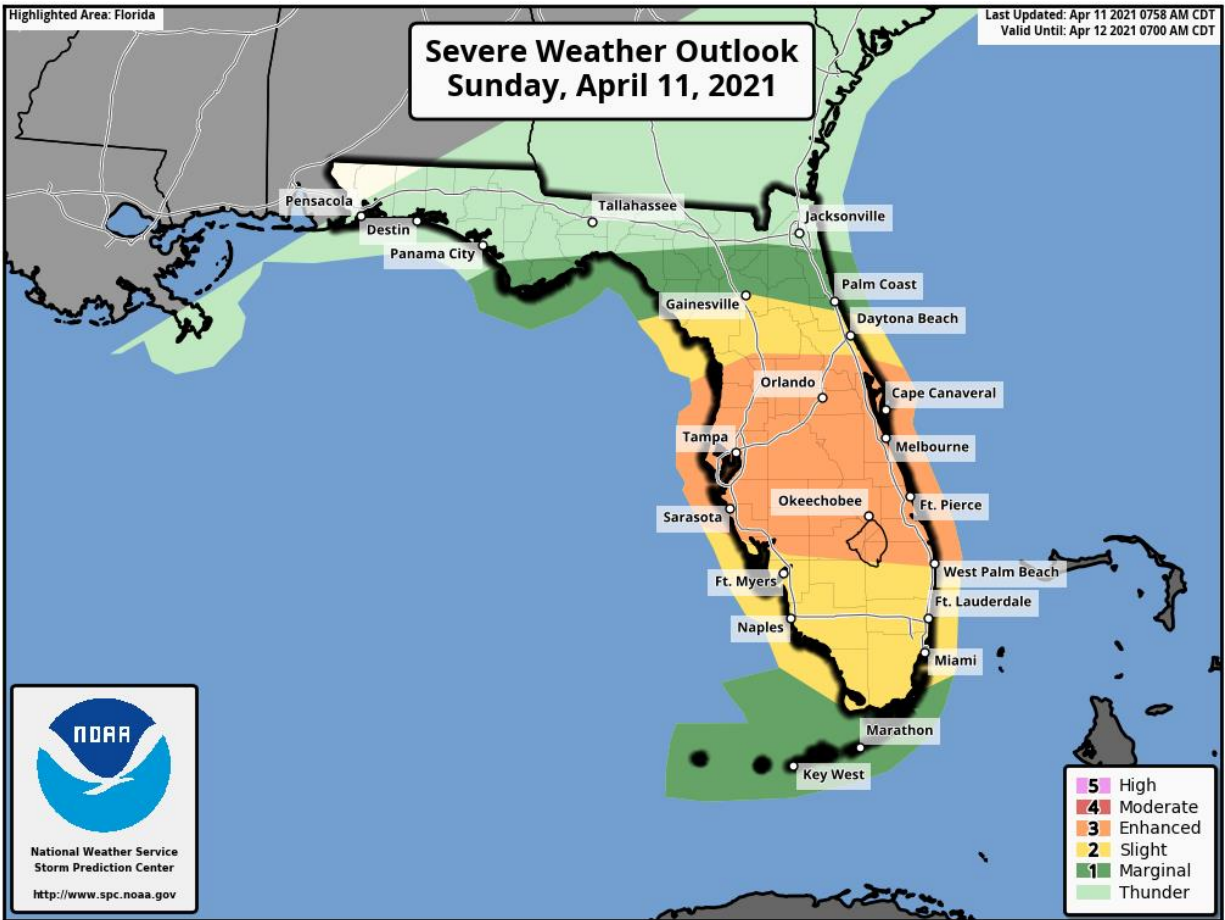
500-Millibar Height Contour at 7:00 A.M. E.S.T.



SPC MCD issued at 527 AM EDT with 40 percent probability of watch issuance

MCD Excerpt: The RAP shows effective shear in the 35 to 45 kt range over land but near 50 kt over the water where the CAPE is closer to surface-based. The RAP is also showing mid-level lapse rate near 7.5 C/km across north-central Florida. This environment should support isolated large hail with the stronger rotating storms.

The 14Z Cape Canaveral sounding (not shown) indicated 500 mb temps around -12.3C and 500 mb winds from the west at 55 knots as the mid-level jet strengthened across central Florida.




Severe Thunderstorm Watch

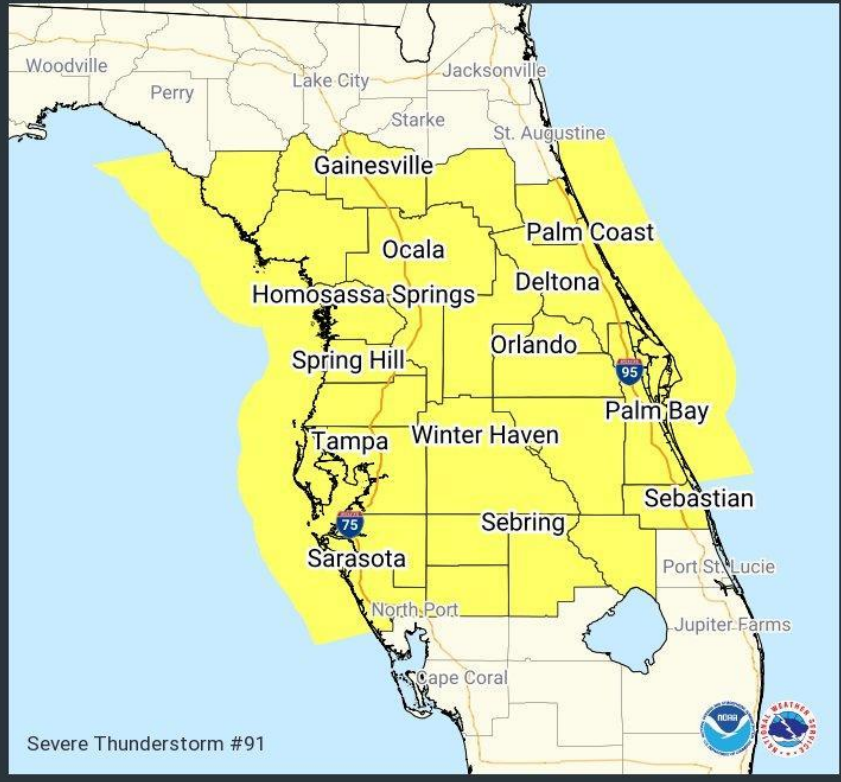
Valid Until
4:00 PM EDT Sunday
April 11, 2021

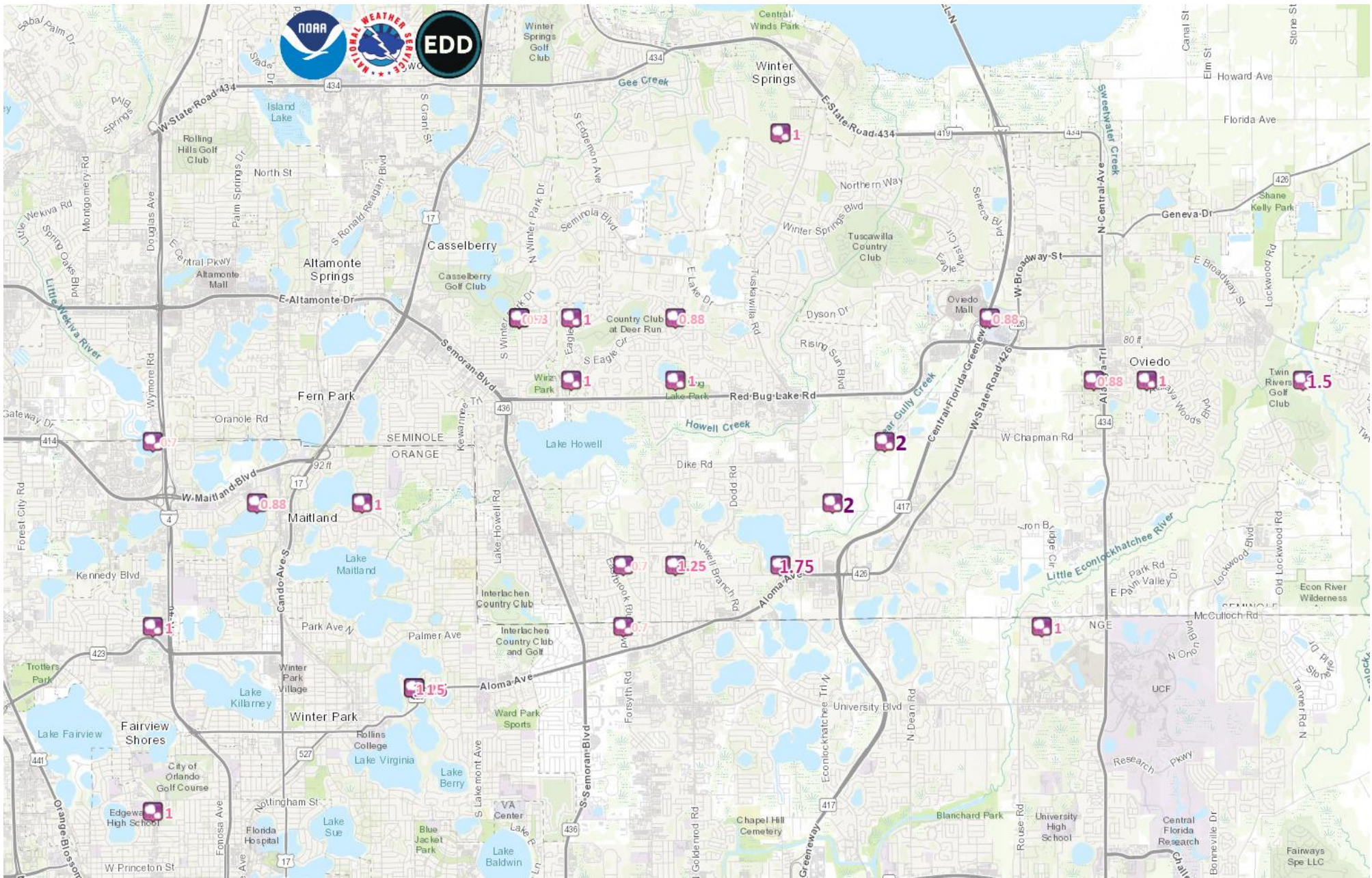
Threat Information

-  **TORNADOES**
A Couple Tornadoes Possible
-  **HAIL**
Isolated Hail Up To Ping Pong Size Possible
-  **WIND**
Scattered Gusts Up To 75 MPH Likely

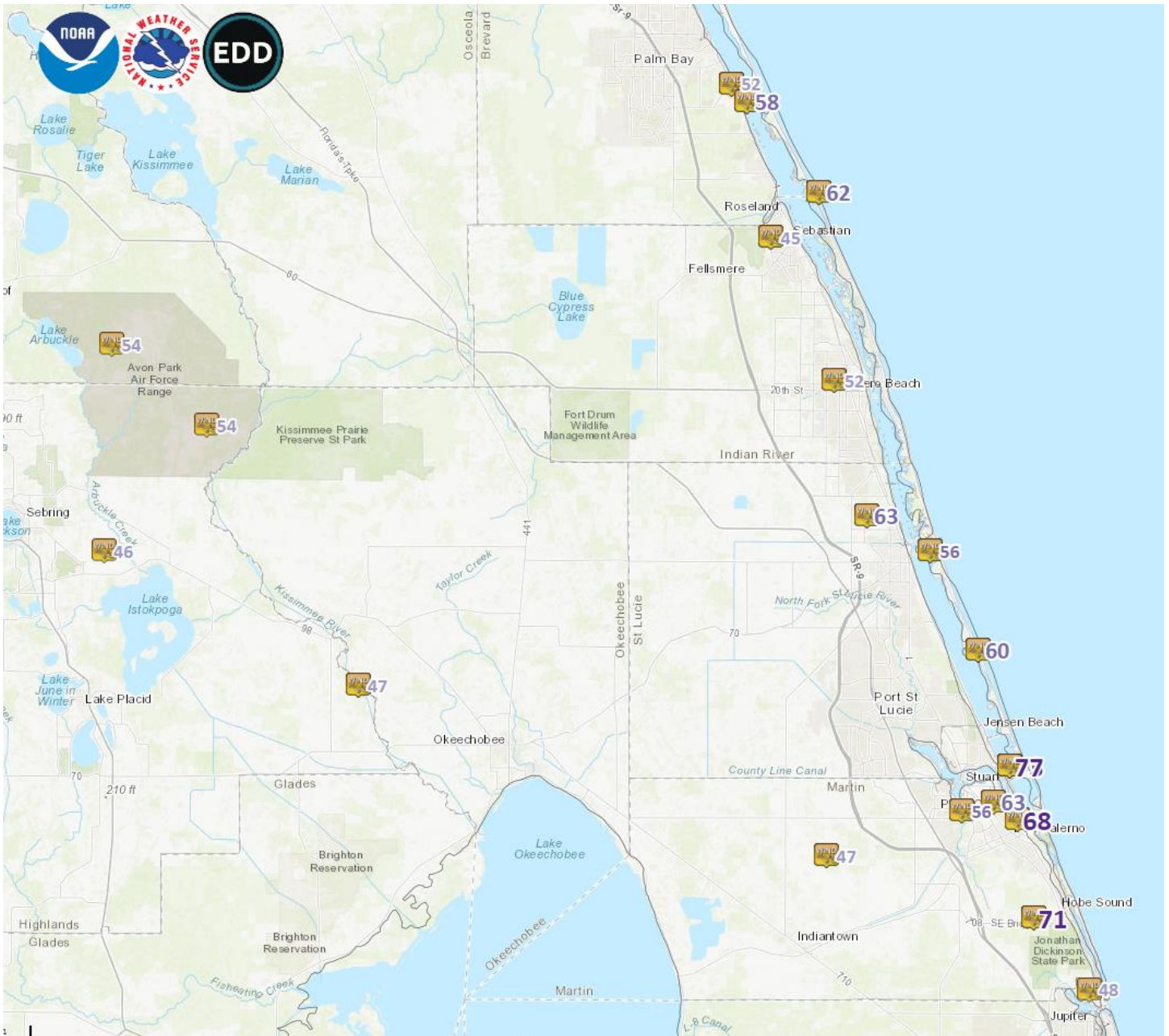
Potential Exposure

 Population: 9,566,938
Schools: 1956
Hospitals: 130

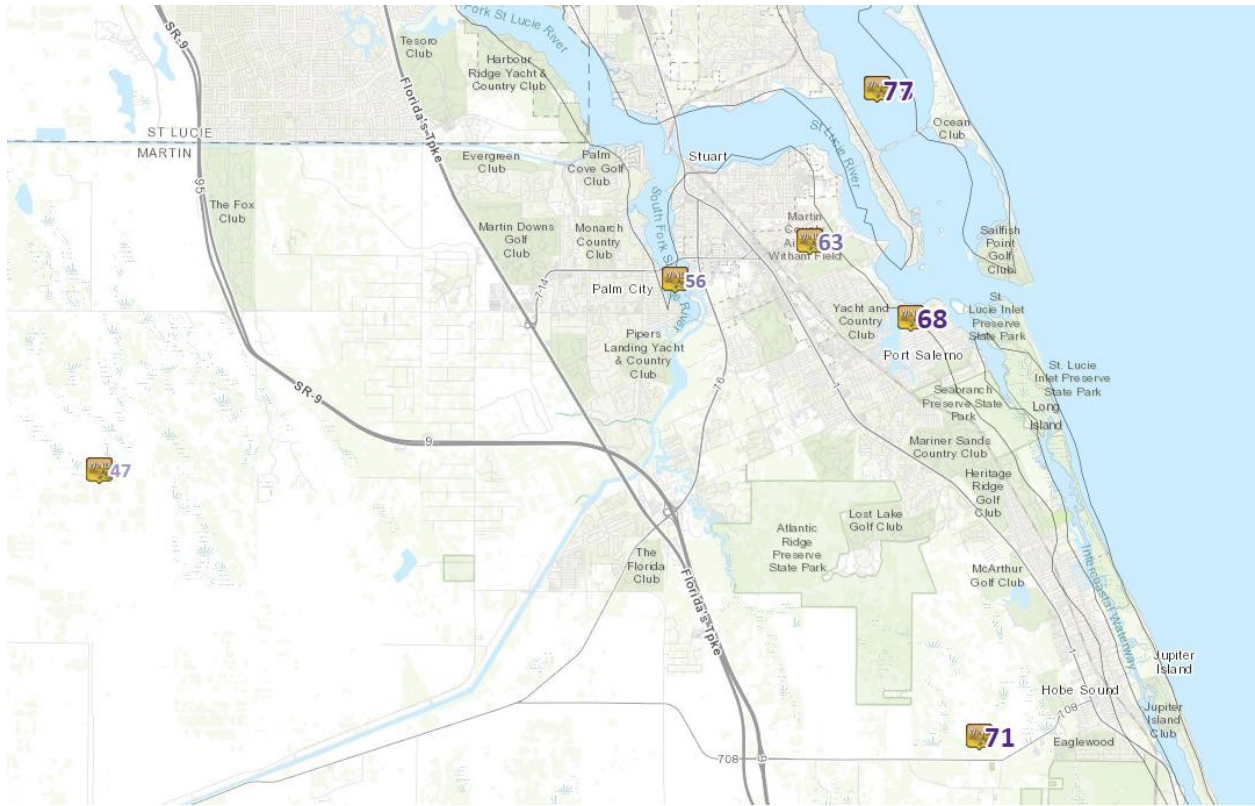




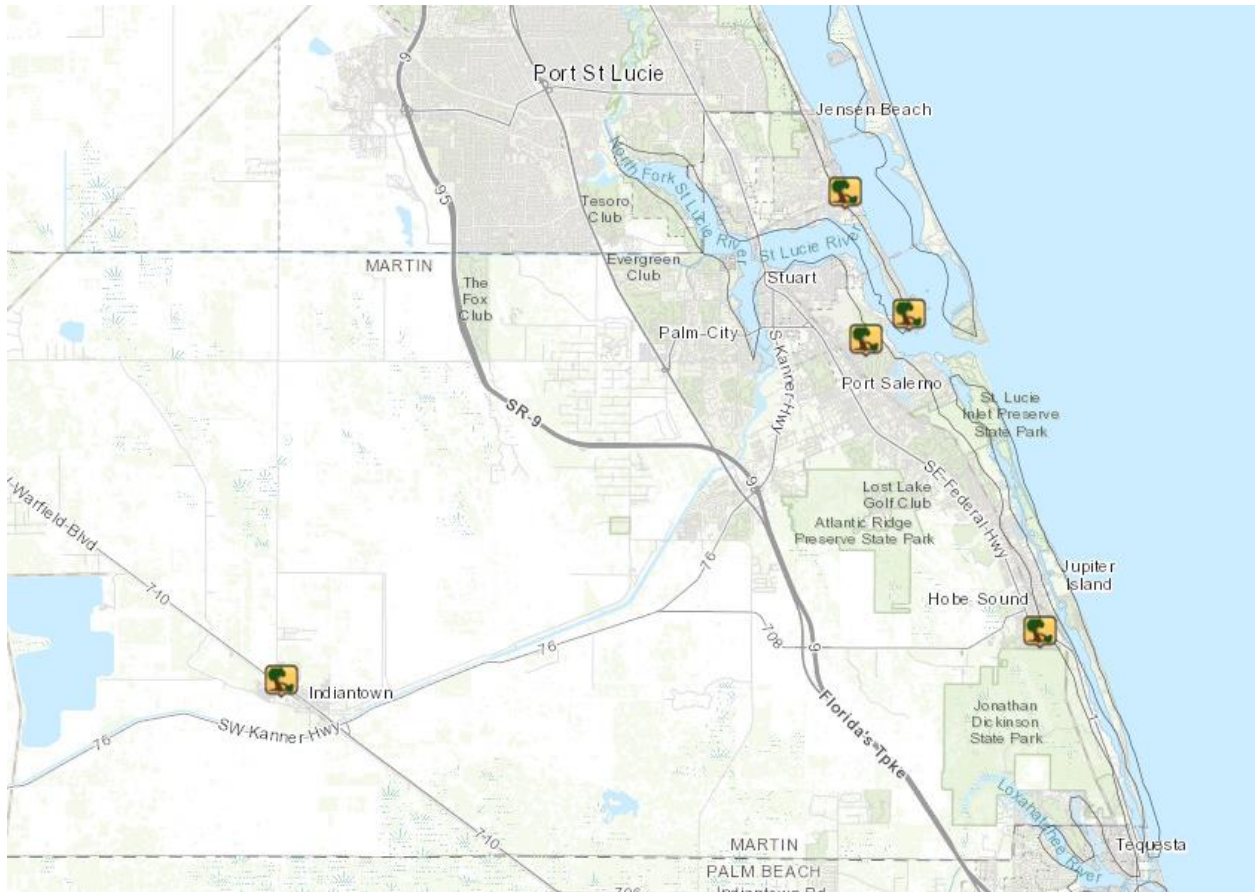
Winter Park to Oviedo Hail Storm Reports



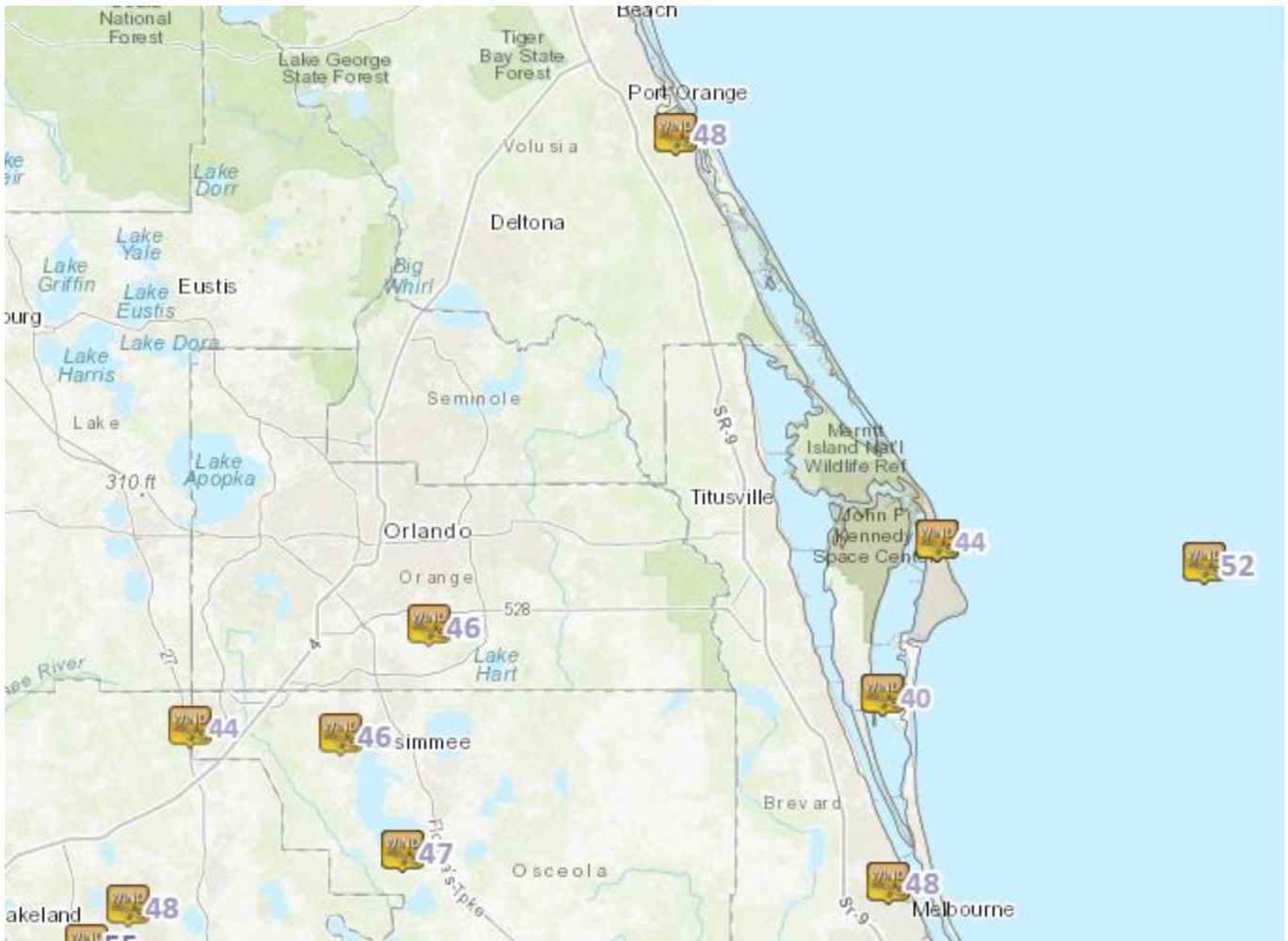
Wind Gust Reports Across Coast and Near Kissimmee River



Wind Gust Reports in Martin County



Wind Damage Reports in Martin County (mostly tree damage)



Wind Gust Reports for Orlando Metro, Volusia/Brevard Counties

Hail Pictures Received



Winter Park (from Eric Burriss, WESH-2)



Winter Park (from Sammy Danielle)



Oviedo 2" Hail (from Terry Schenk); both photos



Maitland (from Lauren Bradley)



Hobe Sound (from Chris Kerr)