

East Central Florida Large Hail Event on May 21, 2020

Event Summary

Numerous thunderstorms developed across east central Florida during the afternoon and evening hours of May 21st, 2020. These storms formed along the east and west coast sea breezes and collision of many ensuing outflow boundaries. Many storms became severe and produced hail across Saint Lucie, Okeechobee, Osceola, Orange, Seminole, and Volusia Counties. Initially storms developed in Saint Lucie and Okeechobee Counties along the east coast sea breeze and Lake Okeechobee breeze. Two of these storms produced quarter-sized hail in Port Saint Lucie and far southwestern Okeechobee County. Storms continued moving north, with more storms developing in Osceola and Orange Counties where golf ball sized hail was observed in Buena Ventura Lakes southwest of Orlando International Airport.

The strongest severe storm developed in Seminole County where numerous reports of large hail of 2 inches and greater were received from the Sanford and Lake Mary areas. The largest confirmed hail stones reached tennis ball (2.50" diameter) to teacup (3.00" diameter) size, mainly along Lake Mary Boulevard. Finally, storms moved into Volusia County where dime to quarter sized hail was reported in Deltona, Samsula, and Oak Hill.

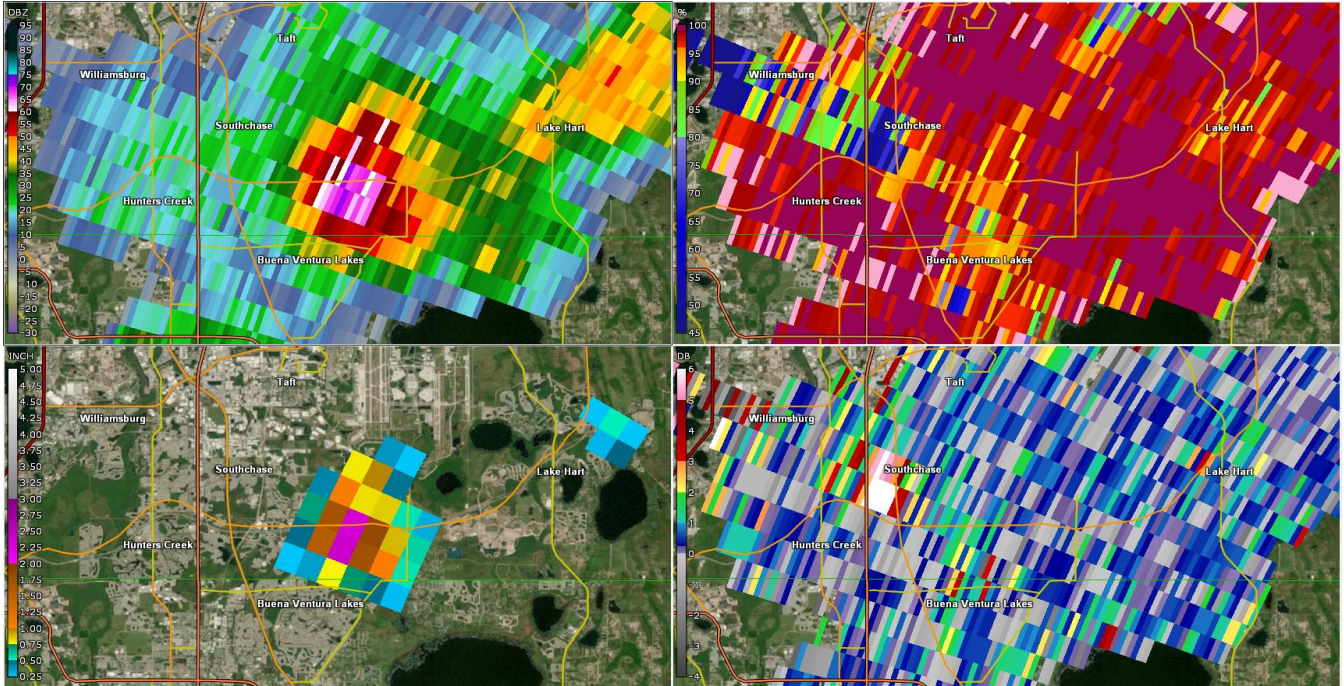
Fast Facts

- The 3" hail in Lake Mary ties the record for the largest hail recorded in the NWS Melbourne County Warning Area of East Central Florida (records go back to 1950). The other occurrences of 3" hail have been:
 - March 25, 1992 in Orlando
 - February 13, 1995 in Indian River County (location not specified)
 - February 13, 1995 in Saint Lucie County (location not specified)
- The largest hail reported in Florida (records go back to 1950) is 4.5" and it has occurred three times:
 - March 30, 1996 in Lake Wales (Polk County)
 - March 1, 2003 in Hampton (Bradford County)
 - May 13, 2007 north of Ocala (Marion County)

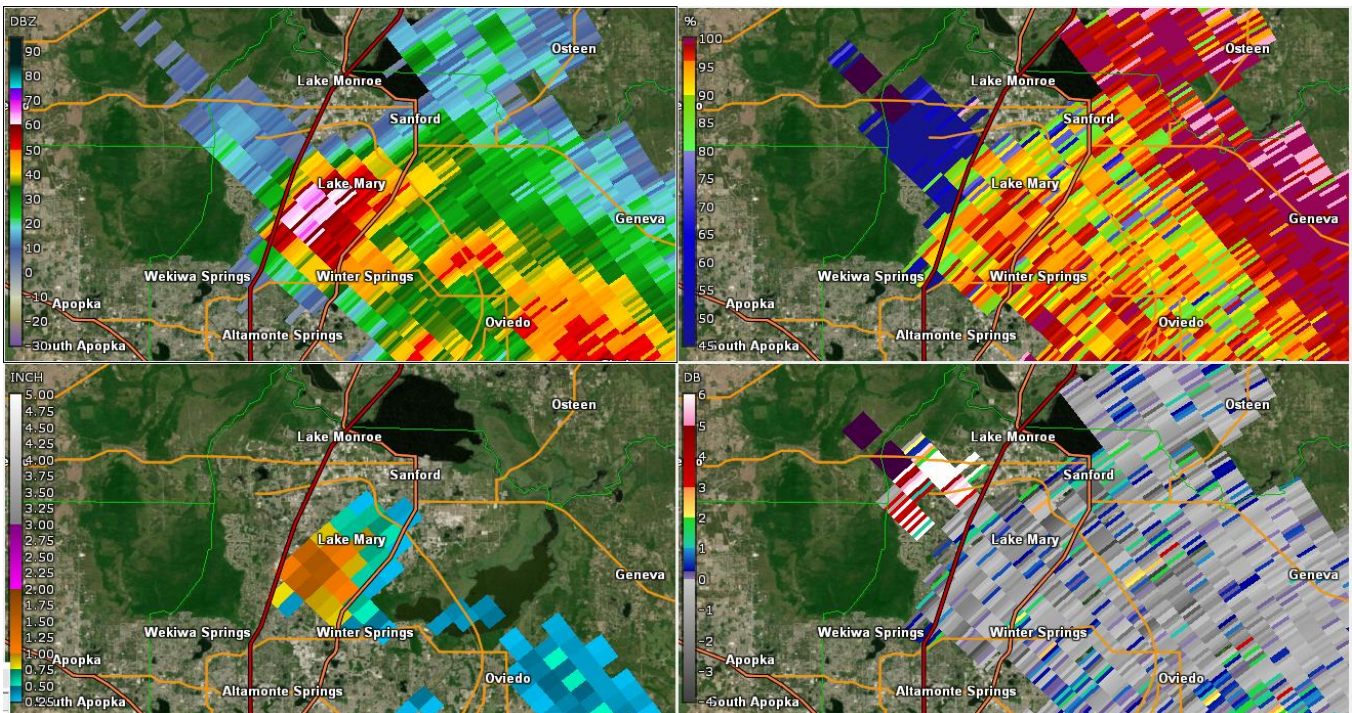
Radar Images

Below are several 4-Panel displays from the KMLB Doppler Radar show several of the hail cores that impacted the Buena Ventura Lakes and Sanford/Lake Mary areas.

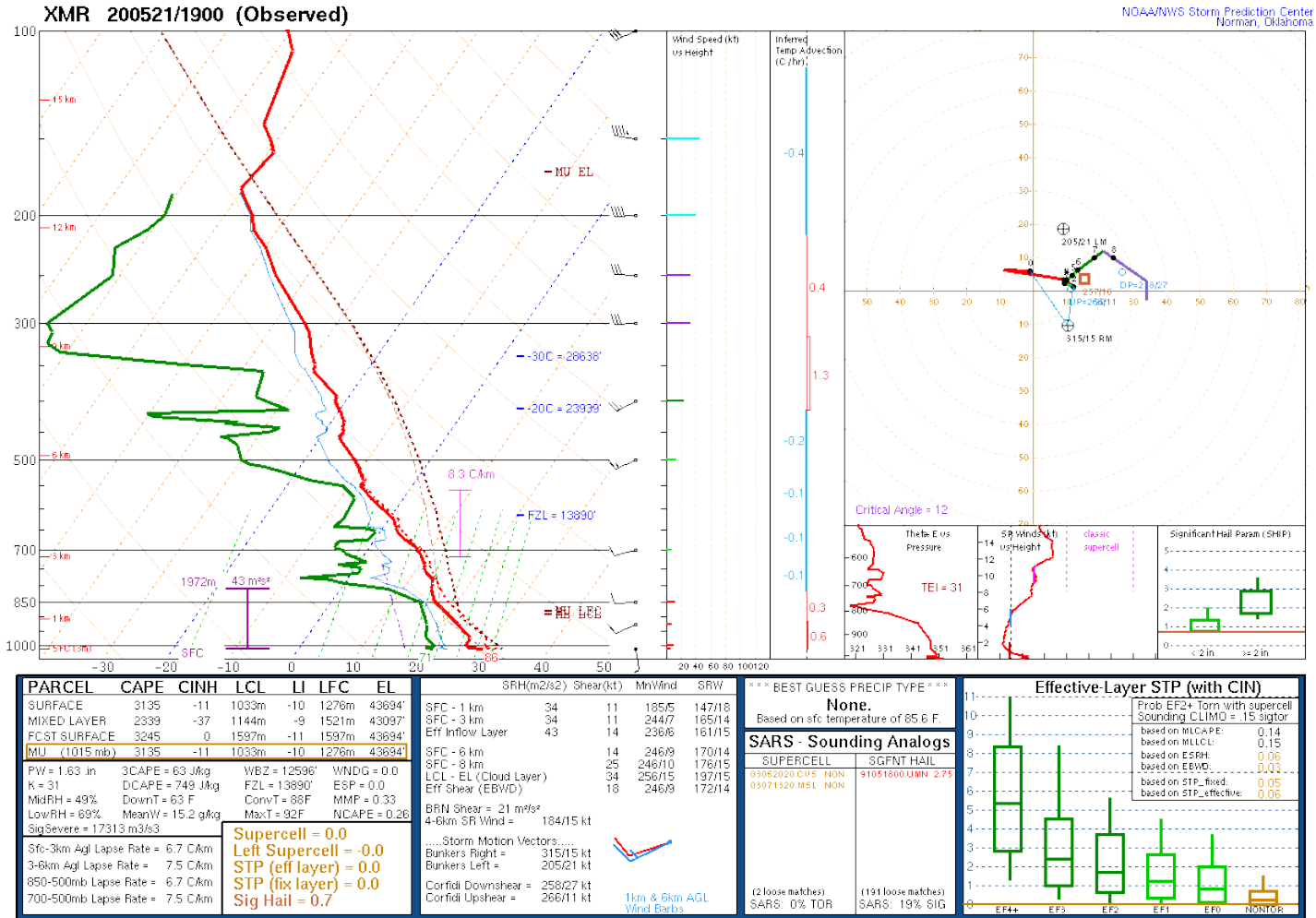
The four panels displayed are: Top Left: Reflectivity; Top Right: Correlation Coefficient (CC); Bottom Left is MESH (Maximum Estimated Size of Hail) Tracks; Bottom Right: Differential Reflectivity (ZDR)



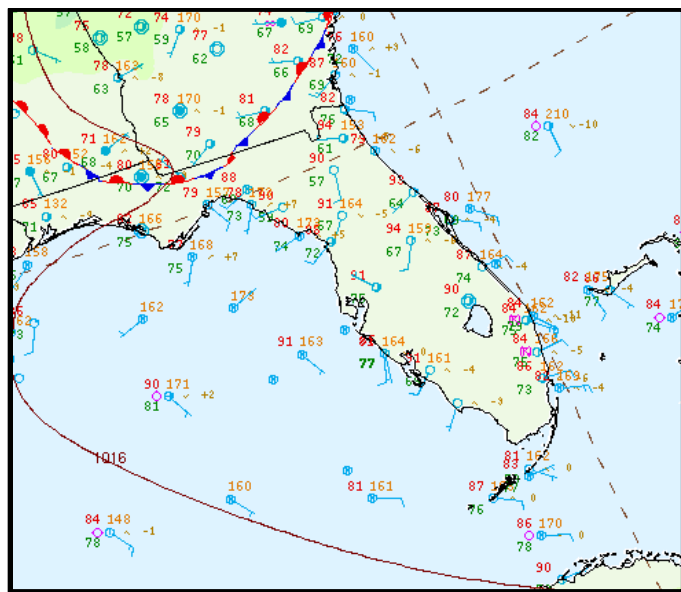
Hail core over Buena Ventura Lakes at approximately 6:09 pm (May 21). The hail core is being seen at approximately 22,000 feet, and has a peak reflectivity value of 71 dBZ. Peak MESH estimates are between 2.00 to 2.25 inches.



Giant hail core over Lake Mary at approximately 7:30 pm (May 21). The hail core is being seen at approximately 24,000 feet, and had a peak reflectivity value of 67 dBZ. A Three Body Scatter Spike (TBSS) is seen in the CC image, with peak MESH estimates of 1.75 to 2.00 inches.



Upper Air Observation from Cape Canaveral (XMR) at 19Z (3 PM) on May 21, 2020



Surface Map 5/21/20 at 19 UTC (3 pm EDT)

Hail Photos

Relayed via NWS Social Media, Emergency Management, and Trained Spotters

Sanford



3" hail (photo courtesy of Christopher Grinnel)



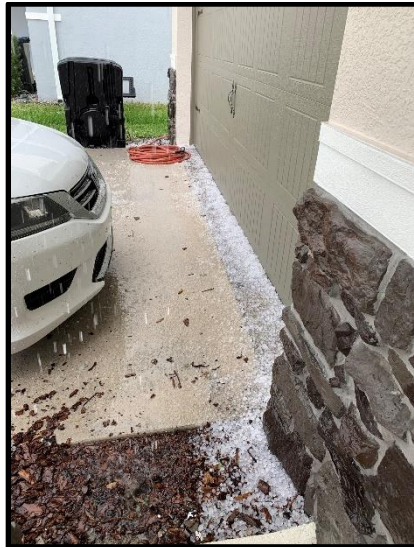
Lake Mary



Buena Ventura Lakes - Wyndham Lakes - Meadow Woods



Lake Nona



East Orlando

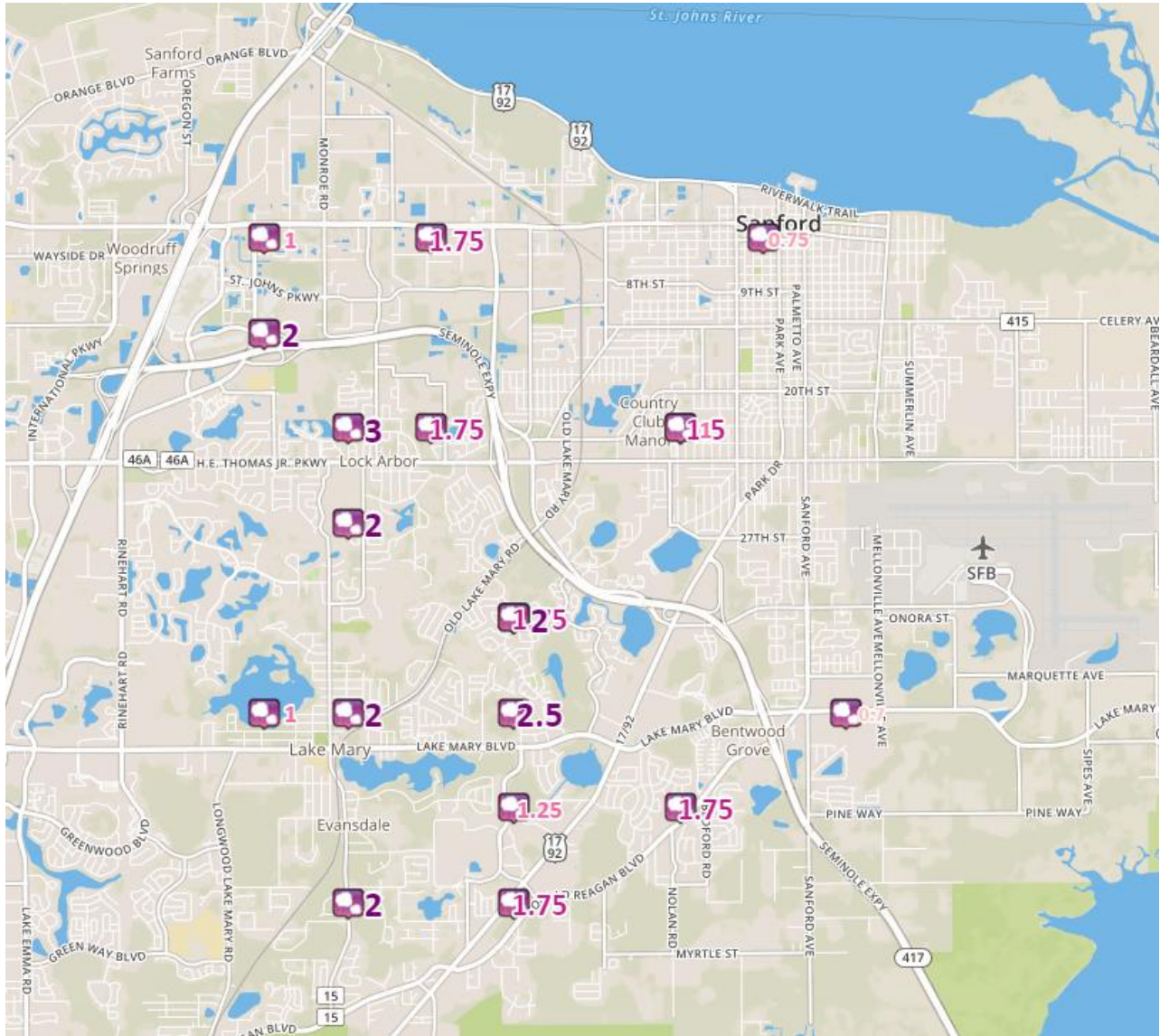


near Curry Road and Dean Road

Port Saint Lucie

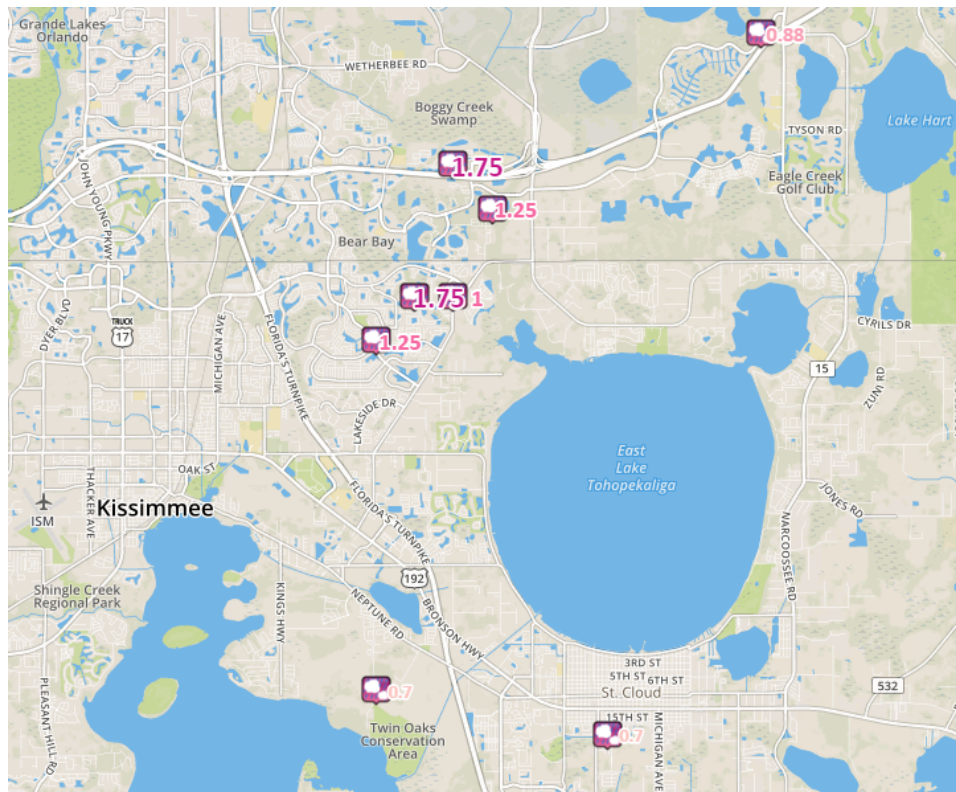
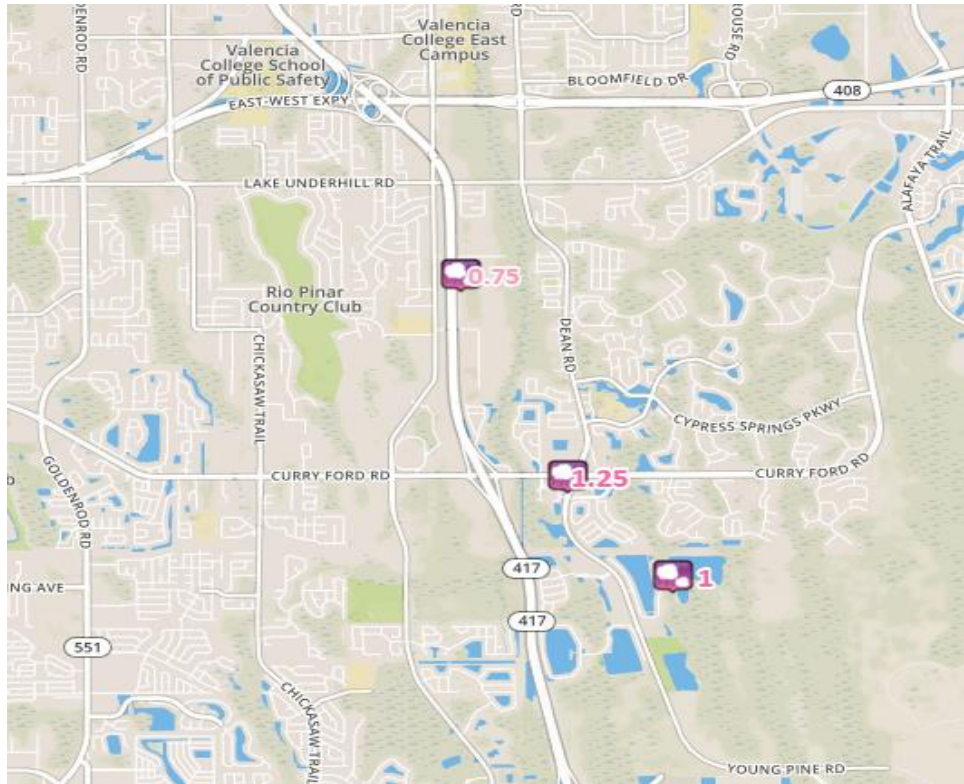


Hail Reports in Seminole County



The values in this graphic represent the maximum hail diameter reported.

Hail Reports in Orange and Osceola Counties



The values in these graphics represent the maximum hail diameter reported.