

National Weather Service Melbourne, Florida

Updated: 10 am Wednesday, November 2, 2011

NWS Melbourne staff conducted a storm survey in Martin County on Sunday, October 30. The survey confirmed that storm damage in the Hobe Sound area occurring the morning of October 29, 2011 was due to an EF-0 tornado. A recently obtained video confirms a second EF-0 tornado occurred farther northeast, between Gomez Road and the Intracoastal Waterway, and continued over Peck Lake as a waterspout.

Tornado #1: Hobe Sound in Martin County, FL

Tornado details: Occurred 9:16-9:17 am, Saturday October 29, 2011

Maximum Intensity: EF-0

Maximum Winds: 65-70 mph

Path Length: 0.28 miles

Tornado Width: 25 yards

Tornado #2: Hobe Sound/Loblolly Bay in Martin County, FL

Tornado details: Occurred 9:18-9:19 am, Saturday October 29, 2011

Maximum Intensity: EF-0

Maximum Winds: 65-75 mph

Path Length: 0.39 miles

Tornado Width: 40 yards

Background/Synopsis of the October 29 Tornado Event:

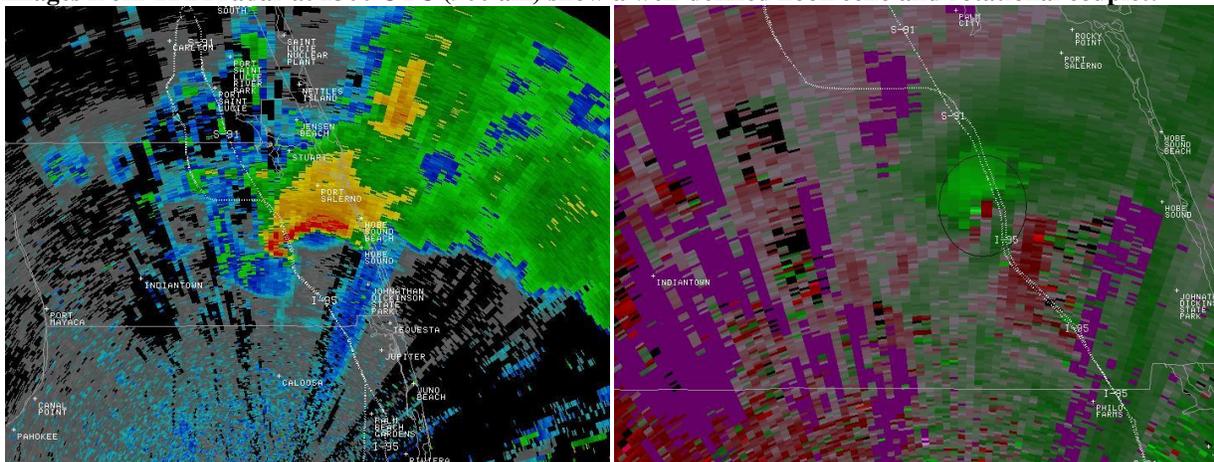
The remnants of Tropical Cyclone Rina provided plenty of moisture across East Central Florida Friday October 28, 2011 into Saturday October 29, 2011. This excessive moisture moved across the area due to southwesterly mid and upper level flow ahead of an approaching cold front from the northwest. An adequate amount of vertical wind shear (change in wind speed and direction with height) was present, creating the possibility for rotation in the atmosphere. This wind shear, combined with forcing from ascent ahead of a cold front and low cloud bases due to a saturated atmosphere, set the stage for potential tornado and/or waterspout formation.

Prior to 830 am on the morning of Saturday, October 29, a cell with weak rotation (but without lightning) over northwest Palm Beach County moved northeast toward Martin County. A Tornado Warning was issued at 829 am as this cell continued to strengthen, with a stronger and deeper level of rotation evident upon the West Palm Beach FAA Terminal Doppler Weather Radar (TPBI TDWR). The Tornado Warning extended from the cell located just south of Indiantown, eastward to the coast, encompassing Jonathan Dickinson State Park, Jupiter Island and Hobe Sound. A spectacular and persistent hook echo was noted

at multiple levels on the TPBI TDWR. At 910 am, a second Tornado Warning was issued for east central Martin County as the cell began to track more northward. This second Tornado Warning also extended eastward to the coast, and included locations farther north through Port Salerno. Both Tornado Warnings covered portions of Hobe Sound, where damage to 42 mobile homes occurred at approximately 916 am. The tornado lifted the roof off one mobile home, and peeled back small portions of three other mobile home metal roofs. The remaining homes experienced mostly (minor) awning and carport damage. Three large palm trees were uprooted or toppled, and numerous smaller trees sustained damage. Two vehicles were also damaged.

The tornado lifted just prior to reaching Highway A1A. The cell then continued to move northeast across the Loblolly Golf Course and SE Gomez Avenue, with a second tornado touchdown at approximately 918 am within the Loblolly Bay residential community. Wind damage to numerous trees occurred across this area. The tornado then reached the intracoastal waterway and moved across Lake Peck as a waterspout. Mariners aboard a 40-foot motor sailor moored in Peck Lake, 0.4 miles northeast of the Loblolly Marina, observed the circulation (with debris and birds entrapped) pass nearly overhead at approximately 920 am. An onboard wind vane and anemometer, atop a 55-foot mast, measured wind gusts near 65 knots from the south, which then shifted quickly to the north with similar gusts. The vessel experienced a broken port hole, while four nearby boats sustained torn canvas and one was pushed aground by the wind. Although the mariners did not observe sea spray or a circulation on the water surface as the vortex approached and passed their location, the wind observations and video photography taken from a vantage point one mile to the south strongly suggested the circulation reached the surface.

Images from TPBI radar at 1300 UTC (900 am) show a well-defined hook echo and rotational couplet:



Below is the path of the tornadoes, waterspout, and funnel cloud, as determined by the NWS survey, eyewitness reports, and video photography.



NWS Melbourne would like to thank the many residents of the Ridgeway Mobile Home Park who helped provide information about the tornado for this report. Special thanks is owed to Bob Plotkin for providing invaluable video photography and detailed observations, and to Paul Sears who offered a detailed description and wind observations as the waterspout passed over Peck Lake.

Damage Photos from the NWS Storm Survey:



A few damage photos from the Ridgeway Mobile Home Park (courtesy of WPTV):

