



# National Weather Service Melbourne, Florida

<http://www.srh.noaa.gov/mlb/>

## Tropical Cyclone Isaac brings flooding rainfall and tornadoes to East Central Florida

August 25-27, 2012

Tropical Storm Isaac formed in the Atlantic late on August 21<sup>st</sup>, 2012 as it approached the Leeward Islands. The storm continued on a westward path into the Caribbean, before turning northwest across western Haiti and eastern Cuba and passing to the west of Key West, Florida as it moved into the Gulf of Mexico. Isaac produced some marine impacts on August 25<sup>th</sup>, but the greatest impacts to East Central Florida occurred Sunday and Monday, August 26<sup>th</sup> and 27<sup>th</sup>. Isaac continued northwest over the Gulf of Mexico, becoming a category 1 hurricane early on August 28<sup>th</sup> before making landfall along the Louisiana coast that evening.

Tropical Cyclone Isaac Track – August 23-30, 2012



## Tornado Damage:

Two tornado touchdowns occurred the morning of Monday August 27<sup>th</sup>, when East Central Florida was in an environment conducive to tornado formation that existed to the northeast of Isaac as it moved northwest in the eastern Gulf of Mexico. The first tornado developed within an isolated cell over rural St. Cloud in the pre-dawn hours. The second tornado touched down in Vero Beach in the late morning, associated with a persistent rainband, which became anchored along the east coast of central and southern Florida.

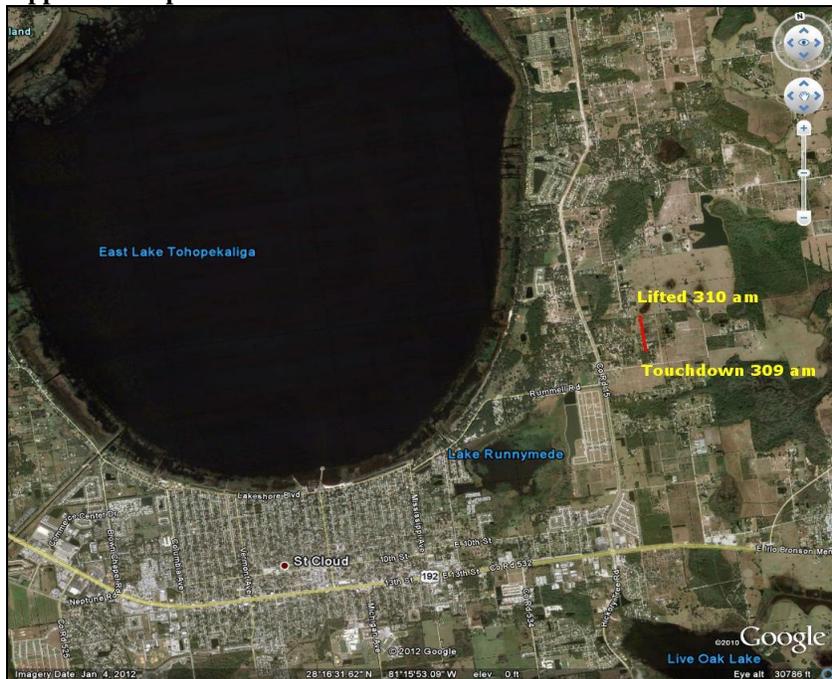
## Tornado Survey Summaries

### Rural St Cloud Tornado:

RATING: EF-0  
ESTIMATED PEAK WIND: 65 MPH  
PATH LENGTH /STATUTE/: 0.8 MILES  
PATH WIDTH /MAXIMUM/: 30 YARDS  
FATALITIES: 0  
INJURIES: 0  
START DATE: AUG 27 2012  
START TIME: 309 AM EDT  
START LOCATION: 2 SSE NARCOOSSEE / OSCEOLA COUNTY / FL  
FL START LAT/LON: 28.2707 / -81.2232  
END DATE: AUG 27 2012  
END TIME: 310 AM EDT  
END LOCATION: 2 SSW NARCOOSSEE / OSCEOLA COUNTY / FL  
FL END LAT/LON: 28.2754 / -81.2357

**SURVEY SUMMARY:** A DAMAGE SURVEY WAS CONDUCTED BY THE NWS DURING THE AFTERNOON OF AUGUST 30 IN ST. CLOUD AFTER RECEIVING A DELAYED WIND DAMAGE REPORT. THE DAMAGE SURVEY FOUND THAT A LOW-END EF-0 TORNADO WITH WINDS ESTIMATED NEAR 65 MPH TOUCHED DOWN IN RURAL ST. CLOUD AND DESTROYED AN OLD, ABANDONED MOBILE HOME WITH A FLOOR ATTACHMENT TO THE FRAME WHICH WAS SEVERELY ROTTED. THE TORNADO CONTINUED ACROSS A WOODED LOT AND OPEN, OLD CITRUS GROVES. MINOR-MODERATE SHINGLE DAMAGE WAS CAUSED TO A BLOCK-CONSTRUCTION HOME FARTHER DOWNSTREAM HOUSE WINDOW WAS BROKEN FROM DEBRIS IMPACT AND MINOR SHRUB AND FENCE DAMAGE WAS NOTED WITHIN THE YARD OF A NEARBY HOME. INSULATION AND SMALL DEBRIS FROM THE MOBILE HOME WAS CARRIED DOWNSTREAM THROUGHOUT THE ENTIRE DISTANCE OF THE TORNADO PATH. THIS TORNADO DEVELOPED WITHIN AN ISOLATED HEAVY SQUALL, WHICH TRACKED NORTHWEST AT 35 MPH ACROSS OSCEOLA COUNTY. OSCEOLA COUNTY EMERGENCY MANAGEMENT ASSISTED WITH THE DAMAGE SURVEY.

### Approximate path of rural St Cloud tornado:



Some photos from the rural St. Cloud tornado survey follow:

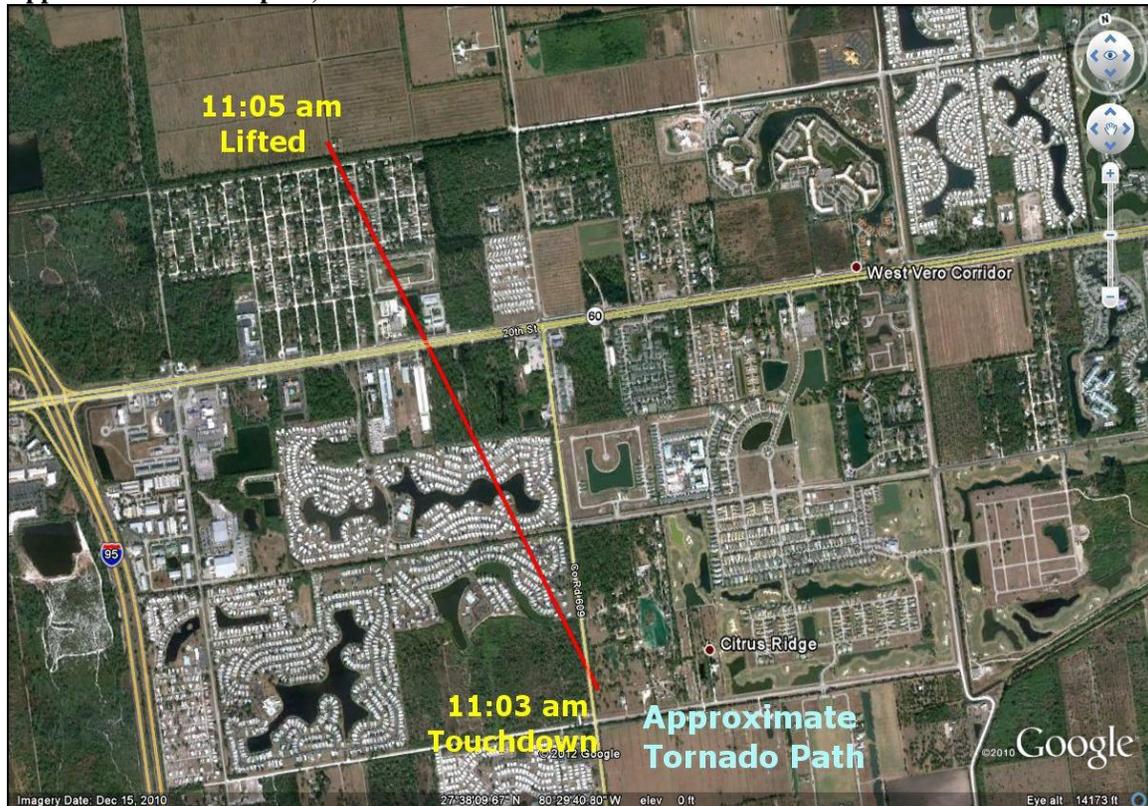


## Indian River County Tornado:

RATING: EF-0  
ESTIMATED PEAK WIND: 80-85 MPH  
PATH LENGTH /STATUTE/: 1.6 MILES  
PATH WIDTH /MAXIMUM/: 180 YARDS  
FATALITIES: 0  
INJURIES: 0  
START DATE: AUG 27 2012  
START TIME: 1103 AM EDT  
START LOCATION: 5 W VERO BEACH / INDIAN RIVER COUNTY / FL  
START LAT/LON: 27.6256 / -80.4956  
END DATE: AUG 27 2012  
END TIME: 1105 AM EDT  
END LOCATION: 1 NW PARADISE PARK / INDIAN RIVER COUNTY / FL  
END LAT/LON: 27.6468 / -80.5065

**SURVEY SUMMARY:** A DAMAGE SURVEY WAS CONDUCTED BY THE NWS DURING THE MORNING OF AUGUST 28 IN VERO BEACH. A HIGH-END EF-0 TORNADO INITIALLY TOUCHED DOWN JUST SOUTHEAST OF INDIAN RIVER COUNTY FIRE STATION NUMBER 7 ON 12TH STREET IN VERO BEACH. A DISCONTINUOUS PATH OF DAMAGE STRETCHED FOR 1.6 MILES THROUGH THE VERO BEACH ESTATES AND COUNTRYSIDE VILLAGE MOBILE HOME PARKS, CROSSED STATE ROAD 60, THEN LIFTED JUST NORTH OF THE PARADISE PARK RESIDENTIAL AREA. A TOTAL OF 95 STRUCTURES, MOSTLY MOBILE HOMES, WERE DAMAGED, WITH 62 RECEIVING MINOR DAMAGE AND AN ADDITIONAL 33 SUSTAINING MAJOR DAMAGE DUE TO WIND AND RAIN. MUCH OF THE DAMAGE WAS DUE TO DEBRIS IMPACT FROM ADJACENT CARPORTS AND ENTRYWAY AWNINGS. THERE WERE SEVERAL SHORT LOCATIONS ALONG THE PATH WHERE DAMAGE WAS MINIMAL OR NON-EXISTENT AT GROUND LEVEL. THE TORNADO DEVELOPED WITHIN A PERSISTENT RAINBAND, CONTAINING INDIVIDUAL CELLS TRAINING NORTHWARD WITHIN THE BAND. INDIAN RIVER COUNTY EMERGENCY MANAGEMENT AND FIRE RESCUE OFFICIALS ASSISTED WITH THE DAMAGE SURVEY.

### Approximate tornado path, east of I-95 near SR-60:



Some photos from the Indian River County tornado survey follow:



## Rainfall:

The heaviest rainfall due to Isaac occurred over the southern sections of East Central Florida, with moderate flooding and temporary closure of several roadways occurring over Martin, St. Lucie, Indian River and Okeechobee counties. Some of the rainfall totals from Isaac include:

### STORM TOTAL RAINFALL FROM 1200 UTC AUG 25 UNTIL 1200 UTC AUG 28

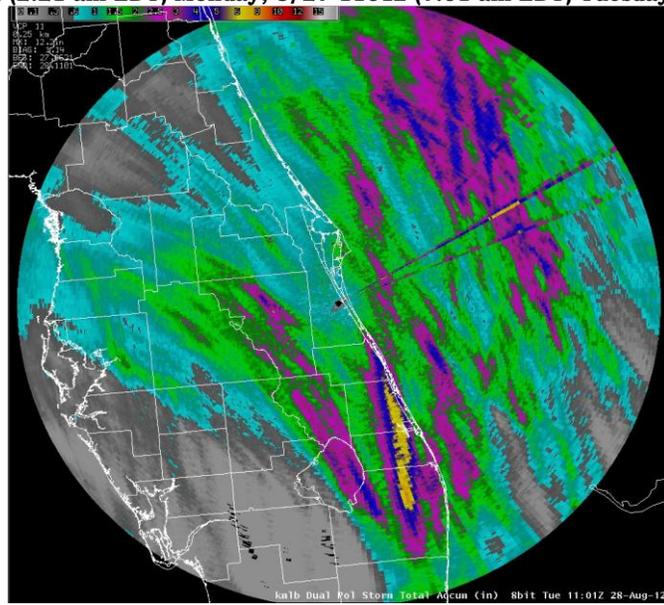
CITY/TOWN LAT LON DEG DECIMAL	COUNTY	ID	RAINFALL (IN)
5.2 S VERO BEACH 27.56 -80.39	INDIAN RIVER	FL-IR-32	16.50
1 W WHITE CITY 27.37 -80.34	ST. LUCIE	WHITE2	14.00
1 NW GROVENOR ESTATES 27.59 -80.44	INDIAN RIVER	VEROB1	13.54
3 S WHISPERING PINES 27.24 -80.84	OKEECHOBEE	OKEEC1	13.45
2 NE PORT SAINT LUCIE 27.29 -80.34	ST. LUCIE	FL-SL-29	13.02
4 WNW PALM CITY 27.20 -80.33	MARTIN	PALMC20	12.33
2 N PORT SAINT LUCIE 27.31 -80.36	ST. LUCIE	FL-SL-22	12.18
4.0 SW PALM CITY 27.12 -80.31	MARTIN	FL-MT-1	11.60
1 WSW WALTON 27.29 -80.28	ST. LUCIE	PORTS41	10.73
2.8 SSE FORT PIERCE 27.40 -80.31	ST. LUCIE	FL-SL-11	10.41
2 SSE SAINT LUCIE WEST 27.29 -80.39	ST. LUCIE	PORTS11	10.39
3 S INDIAN RIVER ESTATES 27.32 -80.31	ST. LUCIE	FL-SL-19	10.25
2 SSW PORT SAINT LUCIE 27.24 -80.37	ST. LUCIE	FL-SL-13	9.96
6 W STUART 27.19 -80.34	MARTIN	TPKF1	9.73
1 SSE LAKEWOOD PARK 27.53 -80.39	ST. LUCIE	FL-SL-4	9.72
5 S PALM CITY 27.09 -80.28	MARTIN	FL-MT-17	9.70
VERO BEACH HIGHLANDS 27.55 -80.39	INDIAN RIVER	FL-IR-29	9.59
FORT PIERCE 27.44 -80.32	ST. LUCIE	FPCF1	9.56
1 ESE VERO BEACH SOUTH 27.61 -80.39	INDIAN RIVER	FL-IR-27	9.54
2 E PORT SAINT LUCIE 27.28 -80.33	ST. LUCIE	PORTS1	9.47
4 WSW PALM CITY 27.16 -80.33	MARTIN	PALMC22	9.34
5 S PALM CITY 27.09 -80.27	MARTIN	PTSF1	9.33

STORM TOTAL RAINFALL FROM 1200 UTC AUG 25 UNTIL 1200 UTC AUG 28 (contd)

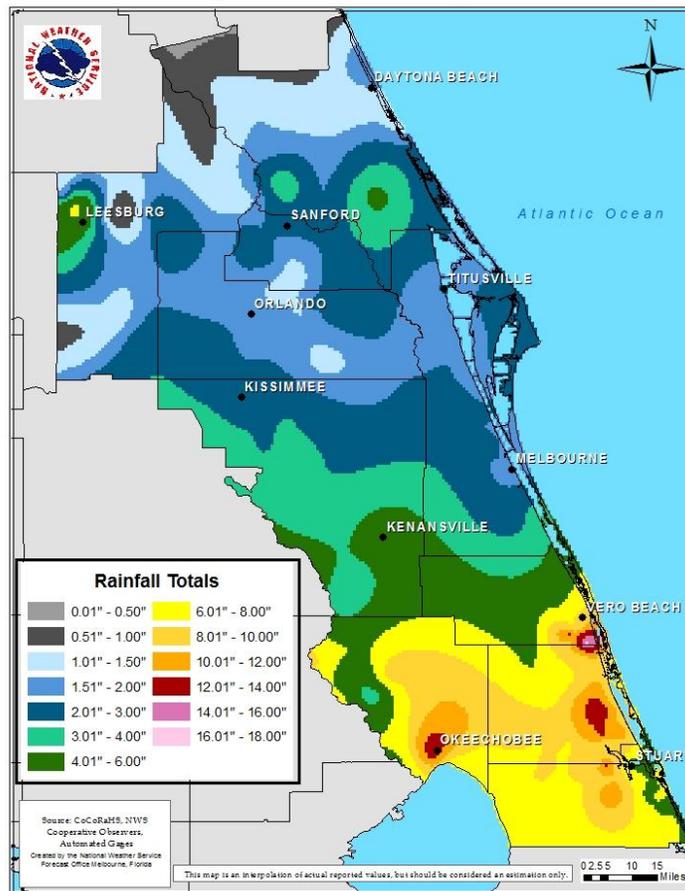
CITY/TOWN LAT LON DEG DECIMAL	COUNTY	ID	RAINFALL (IN)
3 W COUNTRY HILLS ESTATE 27.36 -80.87	OKEECHOBEE	TACF1	9.23
SAINT LUCIE AIRPORT 27.49 -80.37	ST. LUCIE	KFPR	9.15
1 SSW PORT SAINT LUCIE 27.26 -80.36	ST. LUCIE	PSLF1	9.04
5 SW SAINT LUCIE WEST 27.27 -80.45	ST. LUCIE	PORTS45	8.83
1 SSE BASSWOOD ESTATES 27.26 -80.85	OKEECHOBEE	KOBE	8.73
11 NW CORNWELL 27.50 -81.20	OKEECHOBEE	PCFF1	8.51
11 NW CORNWELL 27.50 -81.20	OKEECHOBEE	KRLF1	8.51
9 SW SAINT LUCIE WEST 27.21 -80.48	ST. LUCIE	IY104	8.49
9 W PALM CITY 27.16 -80.42	MARTIN	IX081	8.40
9 SW SAINT LUCIE WEST 27.21 -80.48	ST. LUCIE	OBLF1	8.28
12 N INDIANTOWN 27.19 -80.50	MARTIN	WLNF1	8.12
3 WNW VERO BEACH SOUTH 27.63 -80.45	INDIAN RIVER	VRBF1	8.11
1 WNW VERO BEACH 27.65 -80.41	INDIAN RIVER	KVRB	7.57
1 SSW MIDWAY 28.77 -81.24	SEMINOLE	KSFB	2.07
ORLANDO INTERNATIONAL AI 28.42 -81.31	ORANGE	KMCO	1.93
2 W AZALEA PARK 28.54 -81.33	ORANGE	KORL	1.83
2 S EAU GALLIE 28.10 -80.64	SOUTHERN BREVARD CO	KMLB	1.69
1 ESE DAYTONA BEACH INTL 29.18 -81.05	COASTAL VOLUSIA COU	KDAB	1.27

REMARKS: WEATHER UNDERGROUND AND ASOS SITE DATA ARE VALID FOR CALENDAR DAYS 8/25 THROUGH 8/27. THE LEADING "KFL" OF EVERY WEATHER UNDERGROUND SITE ID HAS BEEN REMOVED FOR SPACE CONSIDERATIONS.

The following shows dual-pol radar estimated rainfall during the period 0621Z (2:21 am EDT) Monday, 8/27-1101Z (7:01 am EDT) Tuesday, 8/28.



### Tropical Storm Isaac Rainfall Totals August 25-27th, 2012



**A few flooding pictures from the Treasure Coast (courtesy TCPALM):  
Fort Pierce Area:**



**Port St Lucie Area:**



**Highest Winds and Lowest Sea Level Pressure:**

LOWEST SEA LEVEL PRESSURE/MAXIMUM SUSTAINED WINDS AND PEAK GUSTS

METAR OBSERVATIONS...

NOTE: ANEMOMETER HEIGHT IS 10 METERS AND WIND AVERAGING IS 2 MINUTES

LOCATION	ID	MIN	DATE/	MAX	DATE/	PEAK	DATE/
LAT	Lon	PRES	TIME	SUST	TIME	GUST	TIME
DEG	DECIMAL	(MB)	(UTC)	(KT)	(UTC)	(KT)	(UTC)
-----							
KDAB-DAYTONA BEACH INTL, FL							
29.18	-81.05	1010.7	27/1623	040/023	26/1101	030/030	26/1044
KFPR-FORT PIERCE/ST LUCIE CO INTL, FL							
27.49	-80.36	1009.0	27/0440	160/047	27/0954	110/032	26/2328
KLEE-LEESBURG INTL, FL							
28.82	-81.80	1009.0	27/1634	120/028	25/1330	150/038	27/0508
KMCO-ORLANDO INTERNATIONAL, FL							
28.42	-81.31	1009.4	27/1632	150/026	27/0409	150/033	27/0408
KORL-ORLANDO EXECUTIVE, FL							
28.54	-81.33	1009.7	27/1606	120/033	27/1049	130/052	27/1049
KSFB-ORLANDO/SANFORD, FL							
28.77	-81.24	1009.7	27/1606	060/023	26/0908	130/033	26/2251
KVRB-VERO BEACH, FL							
27.65	-80.41	1009.4	27/0237	140/037	27/0245	140/045	27/0244
KOBEO-KEECHOBEE COUNTY AP, FL							
27.26	-80.85	0.0	/	130/016	27/1835	130/025	27/1835
KCOF-PATRICK AFB/COCOA, FL							
28.23	-80.60	1011.2	27/2055	160/026	27/1621	130/035	27/1227
KSUA-WITHAM FIELD/STUART, FL							
27.18	-80.22	0.0	/	150/018	27/2047	140/031	27/1447
KMLB-MELBOURNE INTL, FL							

## Highest Winds and Lowest Sea Level Pressure (contd):

LOWEST SEA LEVEL PRESSURE/MAXIMUM SUSTAINED WINDS AND PEAK GUSTS

METAR OBSERVATIONS...

NOTE: ANEMOMETER HEIGHT IS 10 METERS AND WIND AVERAGING IS 2 MINUTES

LOCATION	ID	MIN	DATE/	MAX	DATE/	PEAK	DATE/
LAT LON		PRES	TIME	SUST	TIME	GUST	TIME
DEG DECIMAL		(MB)	(UTC)	(KT)	(UTC)	(KT)	(UTC)
28.10	-80.64	1009.7	27/0321	140/033	27/0326	140/047	27/0325
KTIK-SPACE COAST REGIONAL/TITUSVILLE, FL							
28.51	-80.79	0.0 /		060/018	26/1447	060/026	26/1447
KISM-KISSIMMEE GATEWAY AP							
28.29	-81.43	0.0 /		080/018	26/1850	110/024	27/1450
KMR-CAPE CANAVERAL AFS SKID STRIP							
28.46	-80.56	1011.1	27/2055	180/025	27/1755	160/034	27/1258
KDED-DELAND MUNICIPAL AIRPORT							
29.06	-81.28	0.0 /		180/013	28/1315	180/019	28/1315
KTTS-SHUTTLE LANDING FACILITY							
28.61	-80.69	1011.2	27/2039	150/021	27/1655	150/032	27/1259

NON-METAR OBSERVATIONS...

NOTE: ANEMOMETER HEIGHT IN METERS AND WIND AVERAGING PERIOD IN MINUTES INDICATED UNDER MAXIMUM SUSTAINED WIND IF KNOWN

LOCATION	ID	MIN	DATE/	MAX	DATE/	PEAK	DATE/
LAT LON		PRES	TIME	SUST	TIME	GUST	TIME
DEG DECIMAL		(MB)	(UTC)	(KT)	(UTC)	(KT)	(UTC)
USAF TOWER 001							
28.43	-80.57			I ---/---	--/----	I 140/048	27/1240
USAF TOWER 003							
28.46	-80.53			I 170/032	27/1255	---/---	--/---- I

B. MARINE OBSERVATIONS...

NOTE: ANEMOMETER HEIGHT IN METERS AND WIND AVERAGING PERIOD IN MINUTES INDICATED UNDER MAXIMUM SUSTAINED WIND IF KNOWN

LOCATION	ID	MIN	DATE/	MAX	DATE/	PEAK	DATE/
LAT LON		PRES	TIME	SUST	TIME	GUST	TIME
DEG DECIMAL		(MB)	(UTC)	(KT)	(UTC)	(KT)	(UTC)
TRDF1-TRIDENT PIER							
28.41	-80.59	1011.5	27/2212	160/016	27/2306	120/025	27/2236

Last update: 9/3/12