



December 18, 2009

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To Whom It May Concern:

Included with this letter you will find information you requested from our office concerning weather observations for the area of Brandon, Florida. Hourly observations provided were taken from the Automated Surface Observing System (ASOS) station located at the Tampa International Airport, which is approximately 14 miles from the location of interest. Daily observations were taken from the National Weather Service (NWS) Cooperative Network station at Plant City. Data are provided for the entire month of May 2008, though the focus on this report will be from May 19, 2008, to May 21, 2008. Also attached is a list of conversions and meteorological identifiers that will help you decipher the information. A map of the area, courtesy of Google Maps, has also been included. Note the locations of the stations and area of interest, marked by yellow push-pins or other identifiers.

The ASOS system serves as the nation's primary surface weather observing network and is designed to support weather forecast activities and aviation operations as well as the meteorological, hydrological, and climatological research communities. ASOS detects significant changes, disseminating hourly and special observations via the networks. These observations are on archive and were provided by the National Climate Data Center (NCDC).

Rainfall observations from Tampa International Airport on 05/19/2008 are as follows:

Date	Time	Visibility	Temp	Dew Point	Relative Humidity	Wind	Gust	Pressure	Present Weather	Report Type
19	1118	1.50 miles	75°F	72°F	90%	S 10 mph	--	29.93"	Light Rain	Special
19	1130	4.00 miles	75°F	70°F	85%	SW 10 mph	--	29.93"	Light Rain	Special
19	1134	1.00 miles	73°F	70°F	90%	SW 7 mph	17 mph	29.93"	Heavy Rain w/ Fog	Special
19	1141	2.00 miles	75°F	70°F	85%	SW 10 mph	--	29.93"	Light Rain	Special
19	1151	2.00 miles	75°F	72°F	90%	W 10 mph	--	29.93"	Light Rain	Special



									w/Fog	
19	1153	4.00 miles	75°F	71°F	87%	W 9 mph	--	29.93	Light Rain w/ Fog	Special

Rainfall observations from Tampa International Airport on 05/20/2008 are as follows:

Date	Time	Visibility	Temp	Dew Point	Relative Humidity	Wind	Gust	Pressure	Present Weather	Report Type
20	1011	8.00 miles	81°F	73°F	77%	SSW 15 mph	21 mph	29.90"	Thunder	Special
20	1040	5.00 miles	79°F	73°F	82%	SW 10 mph	22 mph	29.90"	Thunder w/ Light Rain	Special
20	1053	5.00 miles	78°F	73°F	85%	SW 7 mph	--	29.90"	Thunder w/ Light Rain	Special

Observations of temperature and precipitation were taken from the NWS Cooperative Network station in Plant City. These cooperative (COOP) stations are sites where observations are taken or other services rendered by volunteers or contractors. Observers record temperature and precipitation daily and send those reports monthly to NCDC or a NWS office. The COOP stations vary in the times that they report the weather information they've collected, so these totals are for the 24-hour period, usually beginning/ending between 7:00AM and 9:00 AM, though some stations report outside of the desired time window.

Daily values of temperatures and precipitation from each station are included with this report. Any variable listed as -999 represents a missing value for the day. Daily data is collected by the cooperative station and is reported from 2pm to 2pm, which means rainfall that fell on the day of the incident (listed as 05/20/08) could be reported the following morning (05/21/08). Below you will find a table with information from the 19th to the 21st for the Plant City station.

Station	Time of Observation	Rainfall Totals 05/19/08	Rainfall Totals 05/20/08	Rainfall Totals 05/21/08
Plant City	1600	1.75"	0.05"	0.00"

Also included with this letter are official paper copies of requested radar images, provided by NCDC, for certain times during the event. The images provided are known as Base Reflectivity Images, which is a display of echo intensity measured in dBZ (decibels of Z, where Z represents the energy reflected back to the radar). The scale of dBZ values is also related to the intensity of rainfall. Dates and times are located on the right hand side of each image (year/month/date/time are given in GMT). Since time is given in GMT, the date on the first image reflects being taken at 1548 on the 19th, which corresponds to 11:48 EDT on the 19th.

The images were taken from the Tampa, FL, radar site, located at the Tampa International Airport. The location of Brandon, FL, is noted on each image (the red lines represent Interstate 75, Interstate 275 and Interstate 4). Typically, light rain is occurring when the dBZ value reaches 20. The higher the dBZ value, the stronger the rain-rate. Depending on the type of weather occurring and the area of the U.S., forecasters use a set of rain-rates, which correspond to the dBZ values.

At 1548 GMT on the 19th, a line of heavy rain started moving into the area of interest from the south and the radar image shows rain falling just to the south of Brandon. By 1553 GMT, an area of rain with reflectivities over 35 dBZ was impacting the Brandon area. A review of the radar image 10 minutes later (1603 GMT) shows that the heaviest rain had moved into the area. Heavy rain impacted the Brandon area between 1603 GMT and 1618 GMT. By 1623 GMT, the heaviest rain had moved north of the area and light rain lingered over Brandon until 1658 GMT. At 1521 GMT on the 20th, there was an area of light shower activity to the northwest of the Brandon area. By 1603 GMT, the light rain had moved through the area of interest.

I hereby certify that the data provided are true copies of the specified records and/or publications for the times and places indicated thereon on file at the National Climatic Data Center in Asheville, NC.

Sincerely,

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