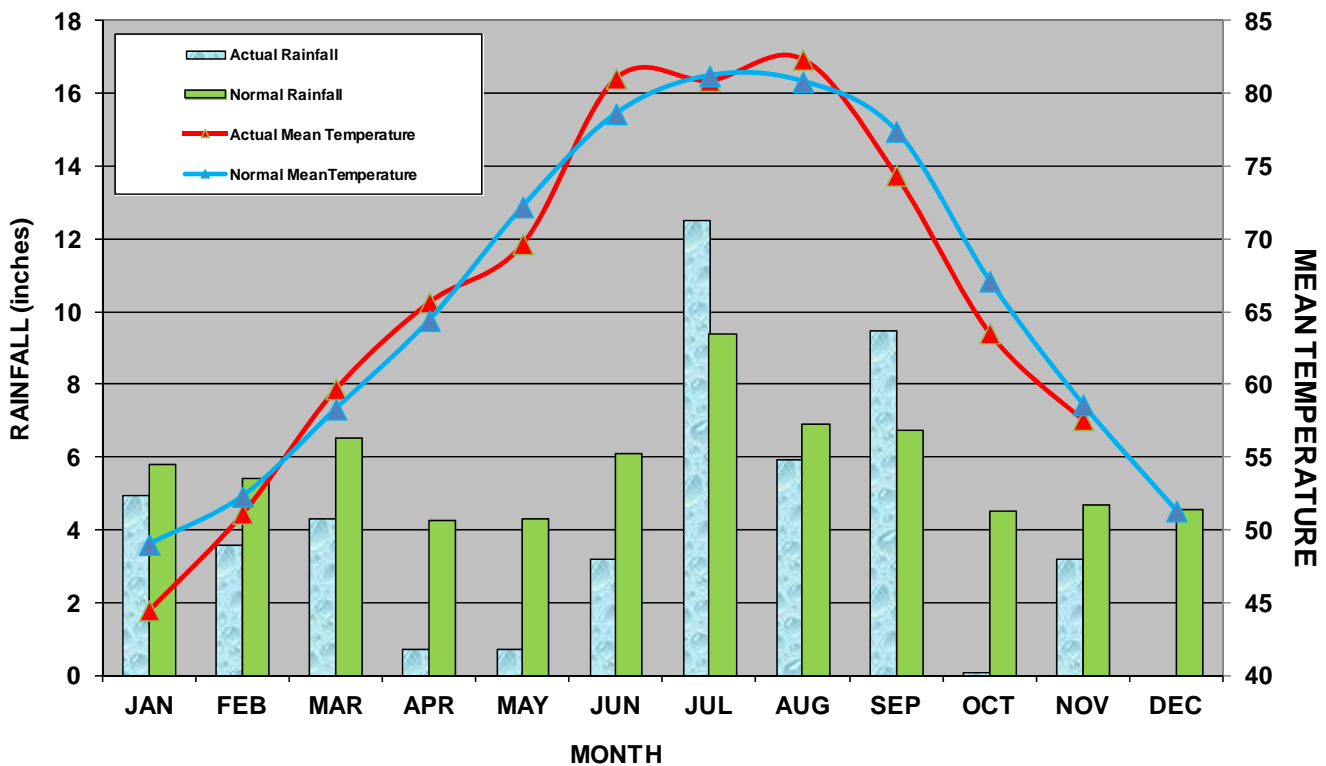


## Introduction

November 2011 produced below normal temperatures and precipitation for Niceville, FL. Severe to extreme drought conditions have developed across northwest FL despite recent rainfall and cooler temperatures (Figures 1 & 2). Cold fronts cleared the area on the 3<sup>rd</sup>, 10<sup>th</sup>, 17<sup>th</sup>, 23<sup>rd</sup> & 28<sup>th</sup> November. No severe weather was reported across northwest FL. A polar airmass descended upon the central gulf coast producing the first fall freeze (12<sup>th</sup> November) for Niceville which is the average date for the fall freeze. Morning temperatures on the 12<sup>th</sup> November fell to 26°F at Crestview and 29°F at Niceville, FL. Temperatures quickly rebounded reaching the upper 70's by mid month. A weak line of thunderstorms passed the area on the 16<sup>th</sup> November, but produced light rainfall less than quarter inch. The cold front on 28<sup>th</sup> November produced isolated rainfall of 1 to 2+ inches across the coastal areas from Fort Walton Beach to Panama City, FL due to an anomalously strong, upper-level weather system. Overall, the past fall season (September-October-November) was significantly cooler than normal for Niceville. The average fall temperature of **65.2°F** was *2.7°F cooler* than the normal (67.9°F) ranking as the **third coolest** fall season in Niceville since record keeping began in 1938. Total fall rainfall was **12.09 inches** which was *2.48 inches drier* than normal (14.57 inches) ranking as the 33<sup>rd</sup> driest fall season since Niceville record keeping began in 1927.

**2011 Jackson Guard Rainfall/NVOC Temperature  
1971-2000 Climatic Normal (Niceville, FL)**



## November 2011 Climate Summary

Jackson Guard rainfall for November totaled **3.20** inches and the Niceville (NVOC) Regional Sewer Board, Inc. recorded **3.18** inches. Eglin AFB recorded **3.07** inches for the month, 0.91 inches below the normal of 3.98 inches. Pensacola, FL recorded **1.78** inches, which is 2.95 inches below the normal of 4.73 inches. There were 6 days with measurable precipitation in Niceville, which equals the November average. There were 2 thunderstorm days during the month, which is 1 day above normal. No new precipitation record was observed during the month. Year to date rainfall at NVOC is 49.37 inches, which is 15.26 inches below the normal of 64.63 inches. Year to date rainfall at Eglin AFB is 54.70 inches, which is 3.22 inches below the normal of 57.92 inches. Year to date rainfall at Pensacola, FL is 40.98 inches, which is 19.74 inches below normal of 60.72 inches.

The [Keetch-Byram Drought Index](#) (KBDI) at the beginning of December 2011 was *moderate*. Moderate KBDI values are an indication that conditions are favorable for the occurrence and spread of wildfires. Severe drought at the present time is not by itself a cause for wildfire; other weather factors (wind, temperature, and relative humidity) play a major role in the actual fire danger. The values below are an indicator of soil moisture conditions in the counties containing Eglin AFB natural resources. Average rainfall across the Eglin AFB reservation for November 2011 was 1.87 inches.

Florida County	Average KBDI (1 December 2011)	Florida County	Average November 2011 Rainfall (inches)
Santa Rosa	482	Santa Rosa	1.57
Okaloosa	449	Okaloosa	1.96
Walton	533	Walton	1.95
Gulf	421	Gulf	1.36

For more information on daily KBDI values, visit the Florida Division of Forestry: [KBDI index](#).

The monthly mean temperature was **57.6°F** which was 1.0°F *below* normal. The average high temperature at Niceville NVOC was **69.3°F** (2.2°F *below* normal). The highest temperature of the month was **77°F** observed on the 17<sup>th</sup> and 23<sup>rd</sup> November. The coolest daytime high was **53°F** on the 29<sup>th</sup> November. The average low temperature was **45.9°F** (0.2°F *above* normal). The lowest temperature of the month was **29°F** observed on the 12<sup>th</sup> & 13<sup>th</sup> November. On 12<sup>th</sup> November a record minimum was established, breaking the previous record (30°F) set back in 1943. There were 2 mornings that fell to 32°F or below which is one day *below* normal. The warmest morning temperature was **67°F** observed on the 16<sup>th</sup> November.

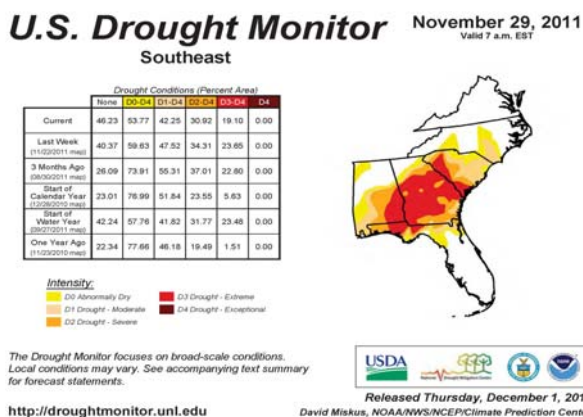


Figure 1. Drought Monitor showing severe (D-2 orange) to extreme (D-3 red) drought across northwest Florida.

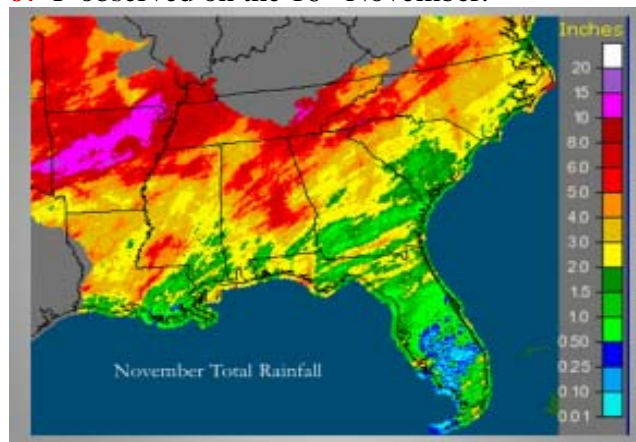


Figure 2. Total precipitation (inches) across the southeast U.S. for November 2011.

### Noteworthy Details on the 2011 Atlantic Hurricane Season

Overall, the 2011 Atlantic Hurricane Season was well above average. The 19 named storms, 7 hurricanes, and 3 intense storms *tied* the 2011 Atlantic hurricane season (Figure 3) for the third highest total number of storms. (Long-term average is 11 named storms, 6 hurricanes, and 2 major hurricanes). There was 1 tropical depression that did not reach tropical storm strength.

The most noteworthy statistic is that no Category 3 or stronger hurricane has hit the U.S. since Hurricane Wilma of 2005. *This record six-year period without a U.S. major hurricane landfall is the first ever in U.S. history.*

No Category 5 hurricane formed during 2011 for the second consecutive year in a row. The last time this occurred was 1999-2002. The 19 tropical storms represents the third highest total (tied with 1887, 1995, and 2010) since records began in 1851. The accumulated cyclone energy (ACE) which measures the combined strength and duration of tropical cyclones during the 2011 season was much above normal at 132% of the long-term median value.

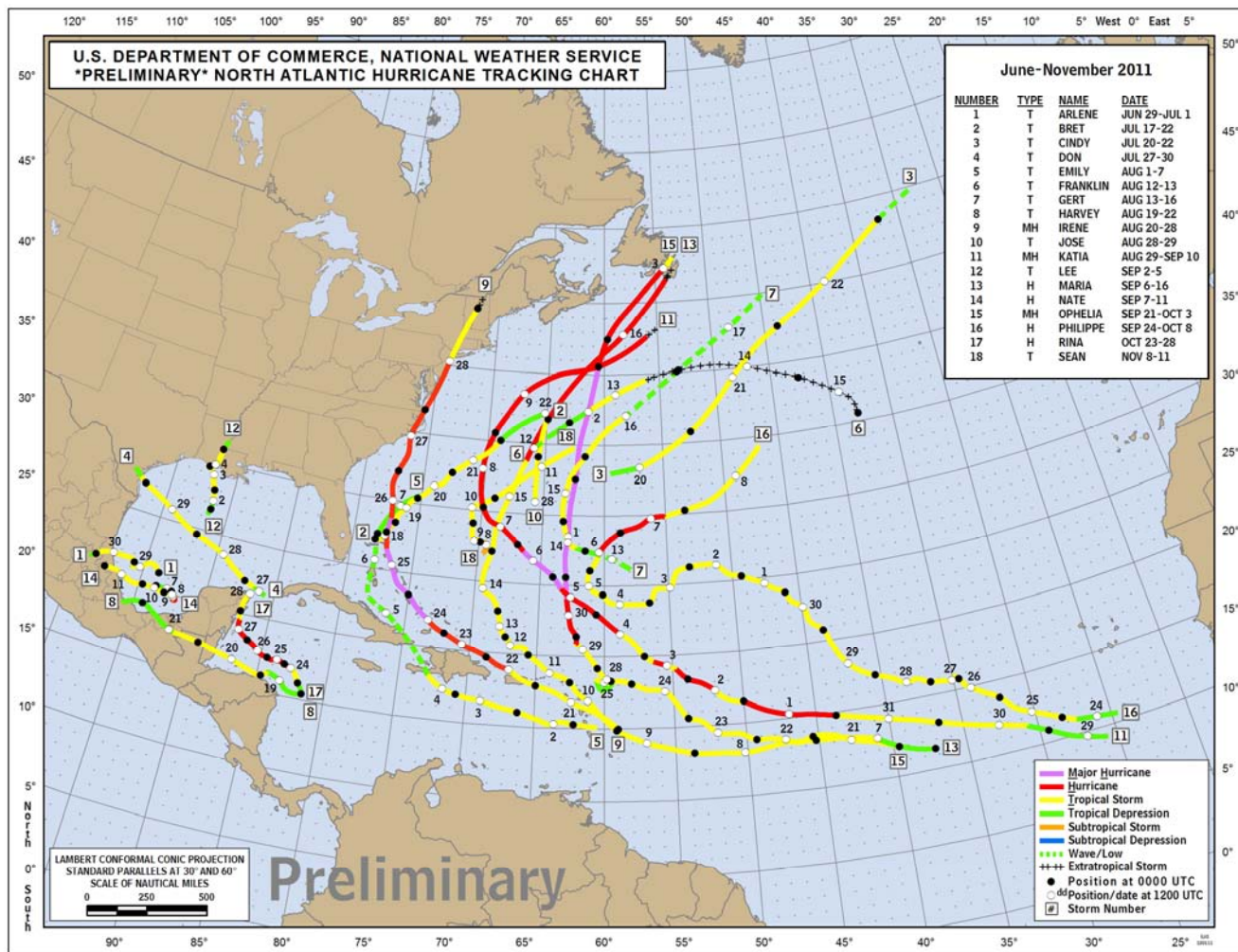


Figure 3. 2011 Atlantic Hurricane Season tracking map courtesy of NOAA. For a complete satellite animation, go to: [NOAA Environmental Visualization Laboratory](http://www.noaa.gov/environmental-visualization-laboratory)

Hurricane Irene was the first storm to strike the U.S. since Ike made landfall in southeast TX in 2008 and was the most significant tropical cyclone to strike the northeast U.S. since Hurricane Bob in 1991. The reason for having dodged the onslaught of another back-to-back hyperactive hurricane season lies in the fact that the Azores/Bermuda high was farther east than usual and favorable winds steered most storms past Bermuda. The exceptions were Hurricane Irene and Tropical Storm Lee. Tropical Storm Don encountered air over the drought-stricken Texas and made landfall as a weak tropical depression. Another factor in this hurricane season was that the drier air aloft prevented the long-track Cape Verde storms from developing into persistent hurricanes unlike the hyperactive season of 2005.

## December Outlook

The Climate Prediction Center <http://www.cpc.ncep.noaa.gov/products/predictions/30day/> outlook for December 2011 predicts a 40% probability of above normal temperatures and a 33% probability of below normal rainfall for the northwest FL.

## December Climatology

December starts off the winter season with an increase in cloudiness and prevailing northerly winds. Cold fronts arrive every four to five days. Occasionally stalled frontal boundaries may develop waves that migrant eastward across the Gulf of Mexico causing widespread heavy rainfall in some years. Visibility becomes obstructed an average of 16 days occurring between the hours of 6 to 8 a.m. Radiation fog (cooling to the dew point during clear calm nights) can limit visibility to less than a quarter mile, but usually dissipates by mid morning. Advection (sea) fog (warm air moving over colder Gulf water) can occur anytime during the day, but most often forms during the late afternoon and can persist for several days.

Thunderstorm frequency averages 2 days during December and 9 days have measurable rainfall. Normal rainfall is **4.65** inches at Eglin AFB and **4.57** inches at Niceville recording stations. The maximum 24-hour rainfall (Eglin) is 7.70 inches and 8.00 inches in Niceville recorded on 10 December 1967. Record December rainfall (Eglin) is 16.64 inches and 20.00 inches (Niceville) in 1953. The driest December (Eglin) produced 0.59 inch and 0.20 inch (Niceville) during 1946.

Average monthly temperatures range from **64°F** to **40°F** (Niceville). The record high is 84°F (December 20, 1968) and the record low is 8°F (13 December 1962). Minimum temperatures below 32°F average ten days during December. The latest date for the first fall freeze occurred on 12<sup>th</sup> December.

Relative humidity (RH) averages 71%. RH > 70% occurs 56 percent of the time. The highest hourly humidity (average RH = 78%) occurs between the hours 3 and 8 a.m.

Surface winds tend to remain calm at nighttime. North winds occur during the day with speeds averaging up to 9 mph. Highest December wind gust was 62 m.p.h. in 1973 from the southwest (Eglin). Surface winds tend to remain calm, or light and variable, or northerly during the nighttime. Northerly or easterly winds tend to prevail during the day with wind speeds averaging up to 8 m.p.h.

This information was compiled from Jackson Guard rainfall observations. NVOC Regional Water Sewer Board, Inc. in Niceville, FL provided the temperature and additional rainfall data. Other reports were obtained from Eglin AFB 46<sup>th</sup> Weather Flight, Mobile National Weather Service, NOAA Climate Prediction Center, Southeast Regional Climate Center, Florida Division of Forestry, and the National Hurricane Center-Tropical Prediction Center websites. Atlantic Hurricane 2011 track map was provided by NOAA and the hurricane summary from Weather Underground.