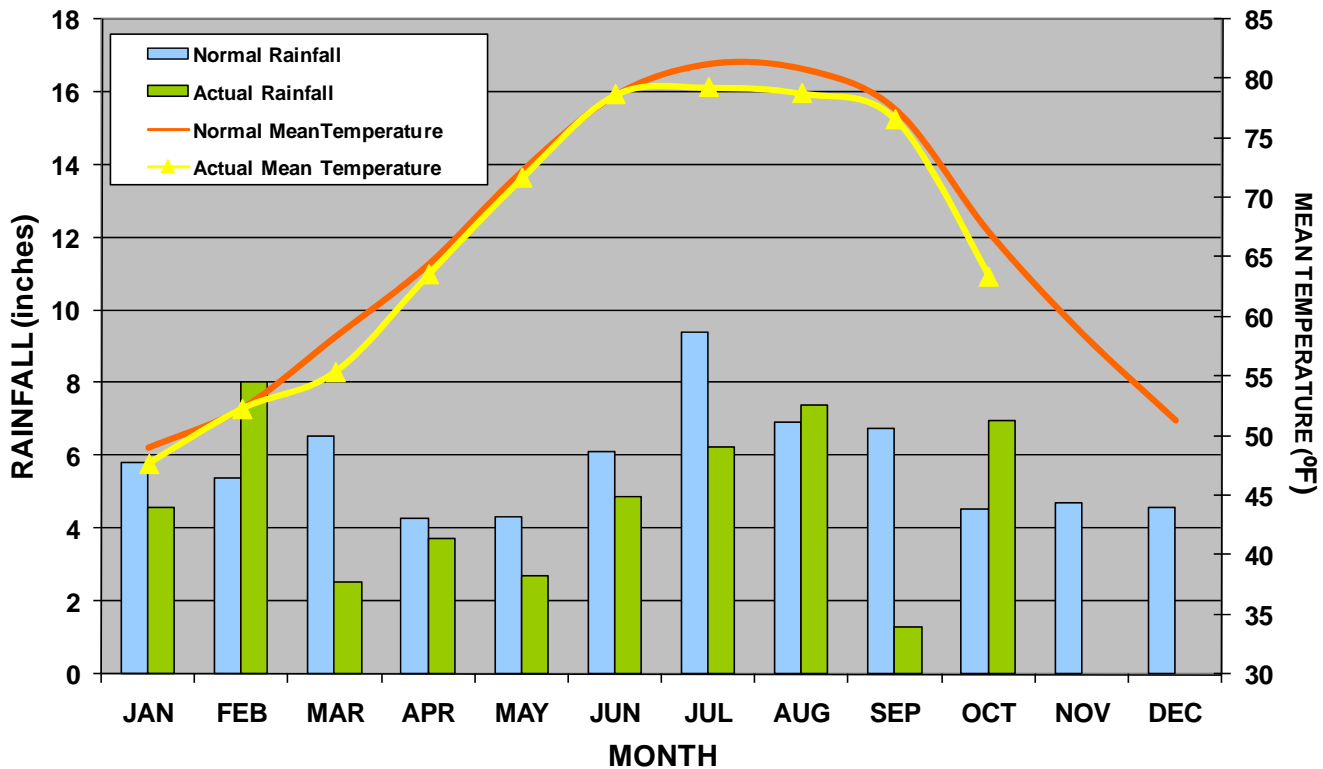


## Introduction

October 2008 produced below normal temperatures (5<sup>th</sup> coolest October) and above normal precipitation (14<sup>th</sup> wettest October) since record keeping began in 1948 for Niceville, FL. Cold fronts cleared the area on the 1<sup>st</sup>, 8<sup>th</sup>, 17<sup>th</sup>, and 27<sup>th</sup> October and two Gulf lows skirted the western FL panhandle on the 9<sup>th</sup> and 24<sup>th</sup> October. The month was remarkable in the sense that the weather pattern was typical of summer, tropical systems and a winter, polar-air mass. This unusual weather pattern was the result of an active upper-level jet stream crossing the western FL panhandle and disrupting the tropical cyclone formation in the northern Gulf of Mexico. Two non-tropical storms produced widespread, long-duration rainfall and eliminated the previously abnormally-dry conditions. The second storm on the 23<sup>rd</sup>-24<sup>th</sup> October produced the greater rainfall of three to over five inches across the western FL panhandle (Figures 1, 2). At month's end, an upper-level trough brought in nearly the coldest temperatures ever experienced so early in the fall season. By the 29<sup>th</sup> October did the significantly cooler and drier air mass become established which allowed for widespread frost and record low temperatures in the upper 20's and low 30's across the FL panhandle eastward to Tallahassee, FL. Only the immediate coastline stayed above freezing. The coldest October temperature ever recorded in Niceville is 27°F on the 30<sup>th</sup> October 1952.

2008 Jackson Guard Rainfall/NVOC Temperature  
1971-2000 Climatic Normal (Niceville, FL)



## October 2008 Climate Summary

Jackson Guard rainfall for October totaled **6.95** inches and the Niceville (NVOC) Regional Sewer Board, Inc. recorded **6.57** inches. Eglin AFB recorded **6.27** inches for the month, **2.46** inches above the normal of 3.81 inches. Pensacola, FL recorded **7.95** inches, which is **3.82** inches above the normal of 4.13 inches. There were 6 days with measurable precipitation in Niceville, which is 1 days above the October average. There were 0 thunderstorm days which is 1 day below normal. Two record 24-hour rainfall amounts occurred in Niceville, FL: **2.45** inches fell on 24<sup>th</sup> October broke the previous record of 1.00 inch (1951) and **1.80** inches on the 25<sup>th</sup> October broke the previous record of 1.25 inches (1997). Year to date rainfall at NVOC is **50.48** inches, which is 9.45 inches below normal of 59.93 inches. Year to date rainfall at Eglin AFB is **39.84** inches, which is 14.22 inches below the normal of 54.06 inches. Year to date rainfall at Pensacola, FL is **50.66** inches, which is 5.19 inches below normal of 55.85 inches.

The [Keetch-Byram Drought Index](#) (KBDI) at the end of October 2008 was *normal*. Beneficial rainfall replenished surface moisture to within 70-80% capacity and reduced the severe fire danger to near normal. The Florida Division of Forestry's [fire weather outlook](#) for the fall 2008 season calls for near normal conditions through December 2008; however, state and federal forecasts (Figure 3) call for abnormal dryness to return to parts of Florida by the early 2009. The values below are an indicator of soil moisture conditions in the counties containing Eglin AFB natural resources.

Florida County	Average KBDI (1 November 08)	Florida County	Average October 2008 Rainfall (inches)
Santa Rosa	384	Santa Rosa	5.06
Okaloosa	327	Okaloosa	5.29
Walton	410	Walton	4.31
Gulf	396	Gulf	3.80

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

The monthly mean temperature was **63.3°F** which was 3.7°F *below* normal. The average high temperature at Niceville NVOC was **74.1°F** (6.4°F *below* normal). The highest temperature of the month was 89°F observed on the 1<sup>st</sup> October. The average low temperature was **52.7°F** (1.0°F *below* normal). The lowest temperature of the month was **31°F** observed on the 29<sup>th</sup> October, establishing a record low minimum which broke the previous record of 33°F set back in 2001. There were no mornings when the low temperature exceeded 70°F.

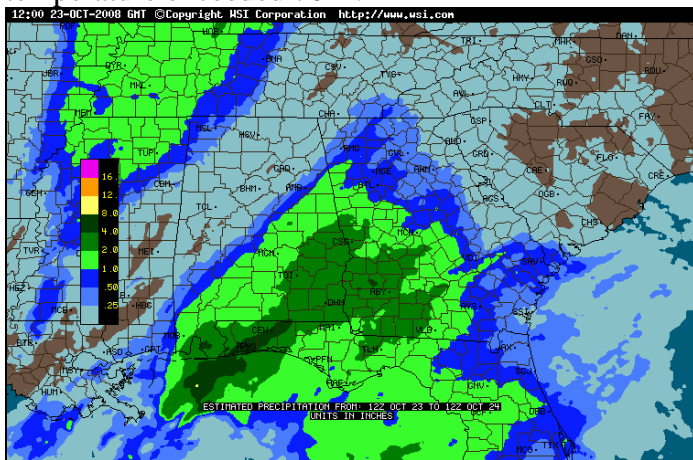


Figure 1. Doppler 24-hour estimated rainfall (inches) across the SE U.S. ending on 24 October 2008.

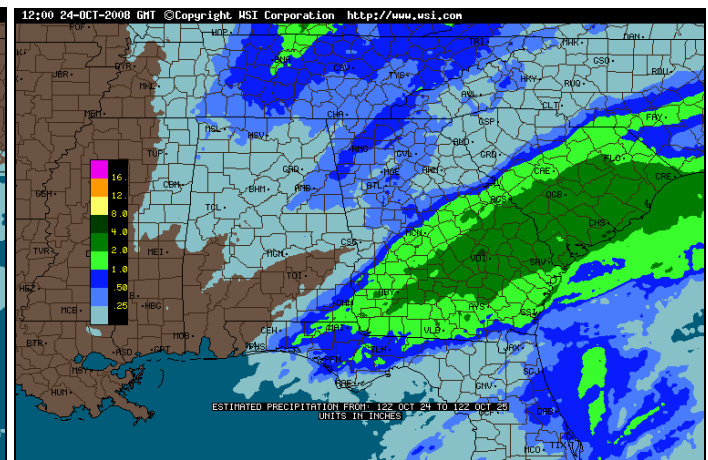


Figure 2. Doppler 24-hour estimated rainfall (inches) across the SE U.S. ending on 25 October 2008.

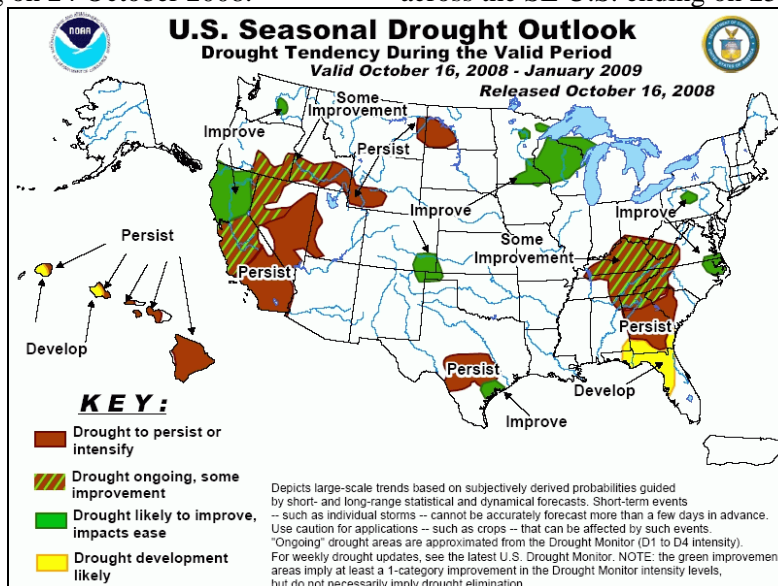


Figure 3. Climate Prediction Center forecast for the drought outlook for early 2009.

## Tropical Summary October 2008

Four tropical cyclones formed during October or were active during September into the following month. None of these storms affected the U.S. mainland. Tropical Storms Laura, Marco, and Nana formed and dissipated through mid October. Tropical Depression 16 failed to become a named tropical storm. After the 18<sup>th</sup> October, hostile upper-level wind shear halted further tropical activity.

Tropical Storm Marco formed over the northwest Caribbean and the Yucatan Peninsula and entered the Bay of Campeche near Vera Cruz, Mexico on 7<sup>th</sup> October becoming possibly the smallest tropical storm on record. Marco had sustained winds of 65 m.p.h., but the tropical force winds extended only 15 miles from its center.

Hurricane Omar was the strongest hurricane during October. With sustained winds of 125 m.p.h. on 16<sup>th</sup> October, Omar struck St. Croix in the U.S. Virgin Islands with considerable damage, but there were no casualties reported.

## November Outlook

The Climate Prediction Center <http://www.cpc.ncep.noaa.gov/products/predictions/30day/> outlook for November 2008 predicts near normal temperatures and rainfall for the northwest FL.

## November Climatology

November transitions to cooler temperatures marking the end of the growing season. Continental high pressure predominates as cooler and drier air masses lower average temperatures 9°F over October's average temperature. The Atlantic hurricane season officially ends at the end of the month. Frontal passages are the chief precipitation maker with occasional waves developing along stalled fronts near the Gulf of Mexico. Thunderstorm frequency averages 1 day with 6 days of measurable rain. Rainfall averages **4.01** inches at Eglin AFB (climatic average 1940-2007) and **4.70** inches at Niceville (climatic normal 1971-2000). The maximum 24-hour rainfall is **6.04** inches on 4 November 1992 (Eglin AFB) and **8.53** inches on 12 November 2004 (Niceville). Record November rainfall is 15.58 inches in 1992 and 0.19 inches in 1956 at Eglin AFB.

Average monthly temperatures for Niceville range from **46°F** to **71°F**. Temperatures never have exceeded 90°F and fall below 32°F an average of 3 days. The average date of the first frost (32°F) is 12<sup>th</sup> November and the first hard freeze (<28°F) is 7<sup>th</sup> December. The record high at Niceville is 89°F (November 1, 1998) and the record low at Eglin AFB is 17°F (November 16, 1940). Relative humidity (RH) averages 72%. RH > 70% occurs 59 percent of the time. The highest hourly humidity (average RH = 80%) occurs between the hours of 3 and 5 a.m.

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 mph. The highest recorded wind speed is 60 mph in 1947.

This information was compiled from Jackson Guard rainfall observations. NVOG 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 Squadron, 10<sup>th</sup> Combat Weather Squadron-Hurlburt Field, Mobile National Weather Service, NOAA Climate Prediction Center, Southeast Regional Climate Center, Florida Division of Forestry, Weather Services International, and the National Hurricane Center websites.