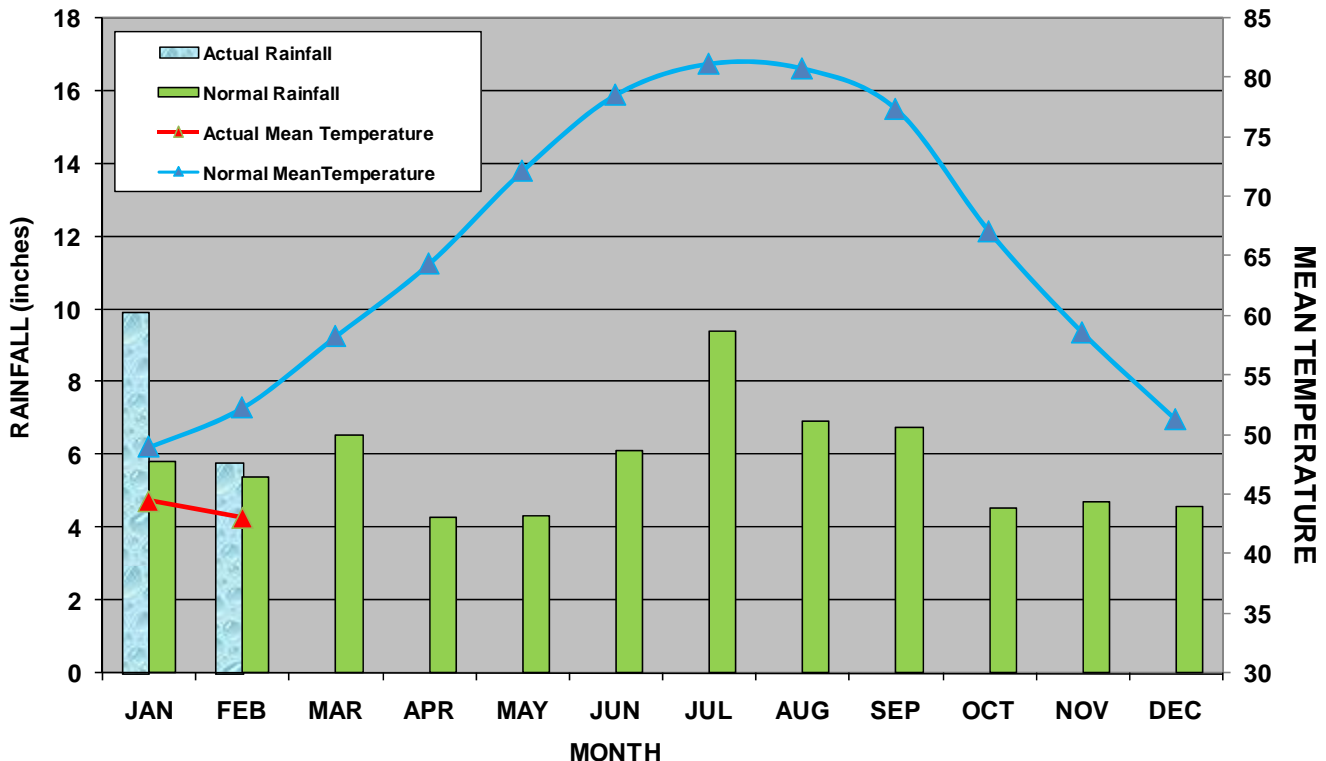


## Introduction

February 2010 produced much below normal temperatures and above normal precipitation for Niceville, FL. The winter months have been unusually cold over much of the southeast U.S. For the winter months of December-January-February, Niceville, FL experienced the *second coldest* average temperature as well as the *third wettest* winter season. Average winter temperature was **45.5°F**, which was 5.9°F below normal and precipitation was **25.22 inches** (11.04 inches above normal). Similar records were produced in Mobile, AL (47.4°F) and Pensacola, FL (48.4°F) with their *fourth coldest* average winter temperature while Tallahassee, FL (49.0°F) reported their *sixth coldest* winter. Winter precipitation set an *all-time high* in Mobile, AL with 31.91 inches (16.40 inches above normal) which shattered the previous winter record of 25.95 inches set back in 1983. Pensacola, FL experienced *second wettest* winter with 25.85 inches while Tallahassee recorded the *fourth wettest* winter with 23.98 inches. Cold fronts cleared the Florida panhandle on the 5<sup>th</sup>, 9<sup>th</sup>, & 22<sup>nd</sup> February and a warm front occurred on 5<sup>th</sup> February. Gulf lows were again common events with occurrences on the 5<sup>th</sup>, 9<sup>th</sup>, 12<sup>th</sup>, & 22<sup>nd</sup>. Flash flooding was not as prevalent as during previous months, but widespread heavy rainfall of 2 to nearly 4 inches fell over saturated ground plaguing the western FL panhandle with nuisance flooding on 5<sup>th</sup> February. A rare snow event was the highlight of the month when 4 to nearly 7 inches of snow fell across southeast AL through southwest GA. Snow was briefly mixed with rain on the evening of the 11<sup>th</sup> February which changed over to snow during the morning hours of 12<sup>th</sup> February. The extreme northern Escambia and Santa Rosa Counties of the FL panhandle reported between 0.5 to over 2 inches and trace amounts observed in Pensacola, Crestview, and Tallahassee, FL.

**2010 Jackson Guard Rainfall/NVOC Temperature  
1971-2000 Climatic Normal (Niceville, FL)**



## February 2010 Climate Summary

Jackson Guard rainfall for February totaled **5.80 inches** and the Niceville (NVOC) Regional Sewer Board, Inc. recorded **6.10 inches**. Eglin AFB recorded **6.81 inches** for the month, 2.04 inches *above* the average (1940-2009) of 4.77 inches. Pensacola, FL recorded **6.03 inches**, which is 1.35 inches *above* the normal (1971-2000) of 4.68 inches. There were 14 days with measurable precipitation at the NVOC, which is 6 days *above* average. There were 2 thunderstorm days, which is one day *below* normal. February 2010 total precipitation ranked as the 24th wettest February since record keeping began in 1927 at Niceville, FL.

The [Keetch-Byram Drought Index](#) (KBDI) at the end of February 2010 was *very low*. North Florida is moister than the rest of the state where the greatest indices show moderate fire danger is present in south central Florida. The values below are an indicator of soil moisture conditions in the counties containing Eglin AFB natural resources based upon reported rainfall. Due to limited observations, average rainfall amounts may be under represented in the listed counties. Please refer to Figure 1 for Doppler precipitation estimates.

Florida County	Average KBDI (1 March 2010)	Florida County	Average February 2010 Rainfall (inches)
Santa Rosa	18	Santa Rosa	5.76
Okaloosa	20	Okaloosa	5.36
Walton	16	Walton	4.62
Gulf	29	Gulf	4.22

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

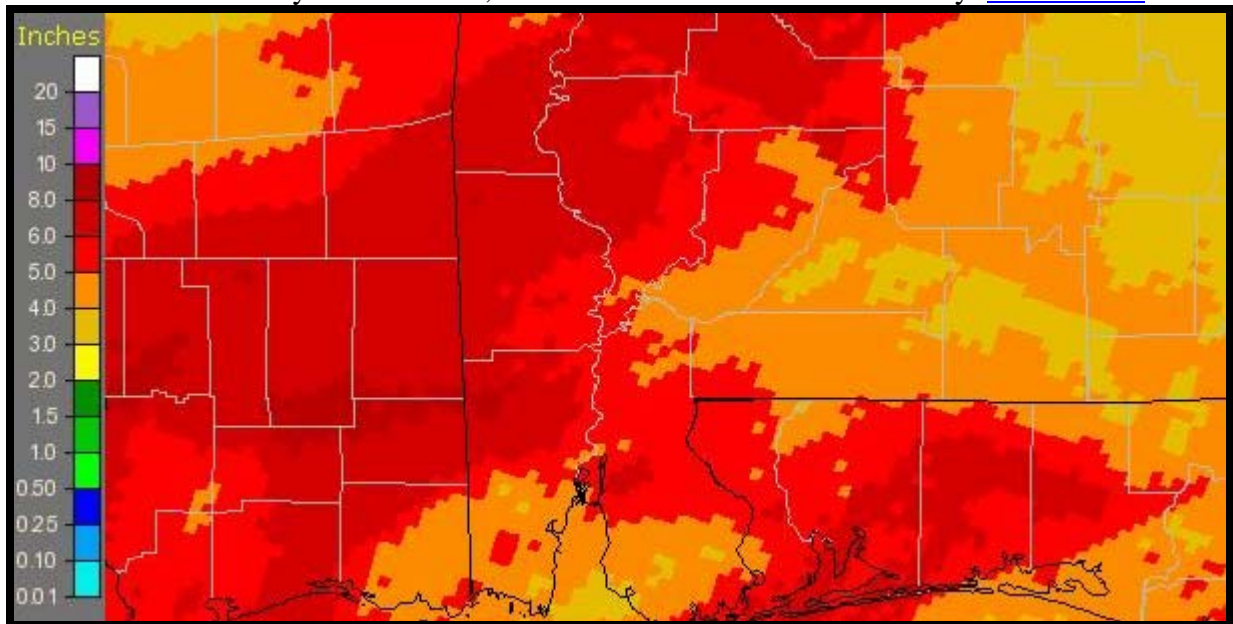


Figure 1. February 2010 total precipitation map showing widespread 4 to 6+ inches of rainfall. Navarre, FL (CoCoRaHS observer -Santa Rosa County) recorded 8.71 inches for the greatest February total reported.

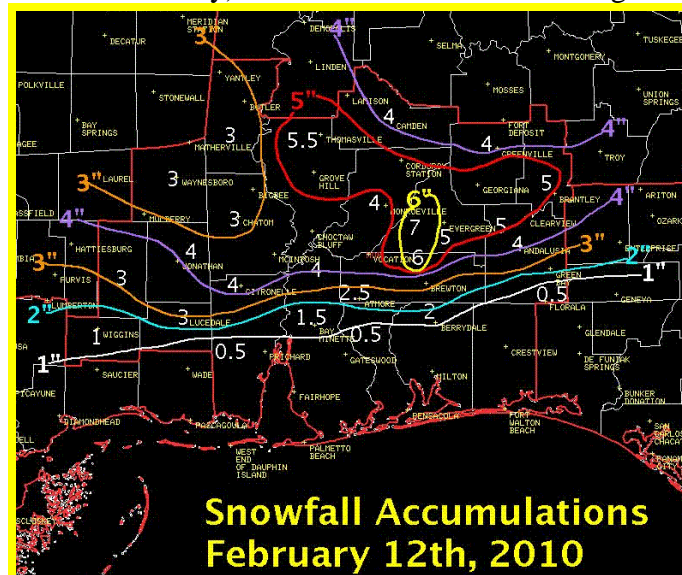


Figure 2. February 2010 total snowfall map showing widespread 1 to 6+ inches accumulations. Belleville, AL (Conecuh County) west of Evergreen, AL recorded 6 inches for the greatest February total reported.

The monthly mean temperature was **43.1°F** which was 9.1°F *below* normal. This is the *second coldest February* since temperature record keeping began in 1927 and the coldest since 1958 (42.4°F). The average high temperature at NVOC was **54.1°F** (10.8°F *below* normal). The highest temperature of the month was 67°F recorded on the 23<sup>rd</sup> February. Two record low maximum temperatures were recorded on 12<sup>th</sup> February when 42°F broke the record of 45°F (1955) and 13<sup>th</sup> February when 38°F broke the previous record of 44°F (1958). The average low temperature was **32.0°F** (7.5°F *below* normal). The lowest temperature of the month was 25°F observed on 17<sup>th</sup> February. There were 19 mornings when the minimum temperature was ≤32°F, which is 11 days *above* normal. Niceville NVOC recorded 14 consecutive mornings of minimum temperatures ≤32°F from 8<sup>th</sup>-21<sup>st</sup> February.

Niceville, FL (NVOC)	<b>Normal Winter (Dec.-Feb.) Temperature (1927-2009)</b>	51.4°F	
	December 2009-February 2010 Average Temperature Temperature Departure	45.5°F -5.9°F (11.5%)	<b>2nd coldest winter</b>
Niceville, FL (NVOC)	<b>Normal Winter (Dec.-Feb.) Rainfall (1927-2009)</b>	14.18 inches	
	December 2009-February 2010 Total Rainfall Rainfall Departure	25.22 inches +11.04 inches (77.9%)	<b>3rd wettest winter</b>

Table 1. Winter season (Dec'09-Jan-Feb'10) summary of temperature and precipitation for Niceville, FL.

### El Niño Outlook

Sea surface temperatures (SST) remained 1.0°C above average across much of the eastern and central equatorial Pacific, a trend marking a slow decline from a moderate El Niño. Latest observations and model forecasts indicate that the current El Niño phase is past its November-December 2009-January 2010 peak of 1.8°C. The current phase will gradually decrease to a neutral phase by the summer 2010. Based on this trend and the combined effects of surplus soil moisture, an active jet stream will continue above normal precipitation and below normal temperatures through March 2010 over the southeast U.S. Longer range model forecasts are split with the majority indicating neutral conditions by May-July 2010 and persisting into the Fall 2010. Several models also suggest the potential of continued El Niño conditions or the development of La Niña conditions during the Fall 2010.

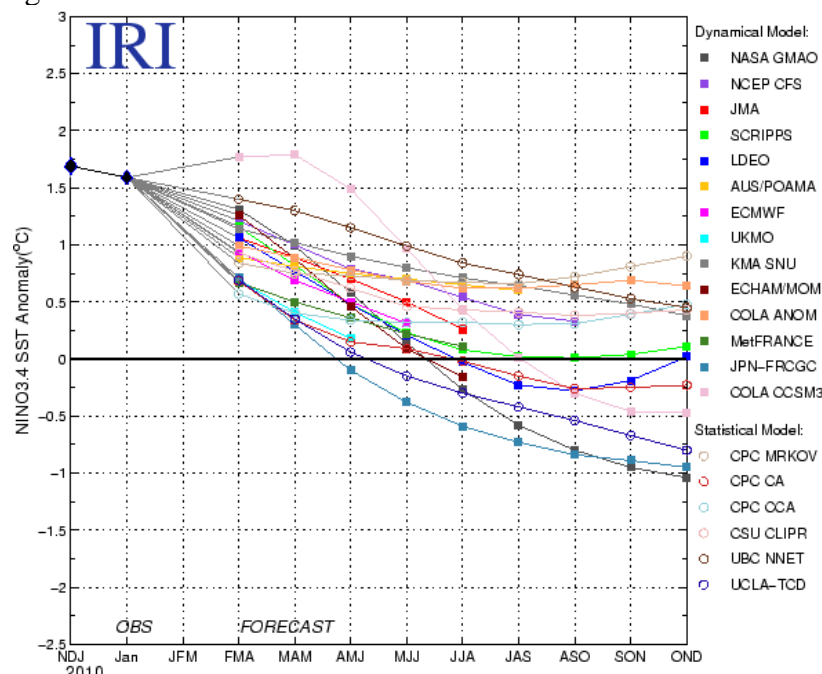


Figure 3. International Research Institute (IRI) forecast for the El Niño Southern Oscillation (ENSO) model forecast released on 16 February 2010.

## March Outlook

The Climate Prediction Center [30-Day Outlook](#) for March 2010 predicts below normal (50% probability) temperatures and above normal (50% probability) rainfall for the Florida.

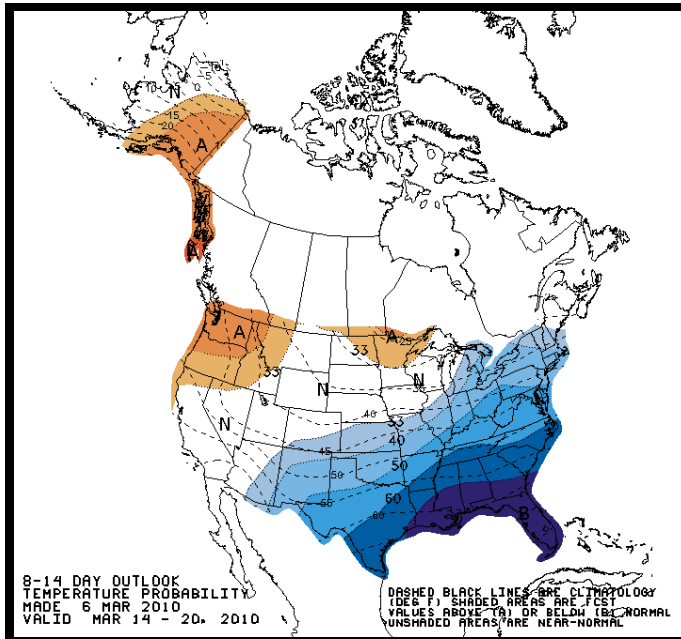


Figure 4. Fourteen day temperature outlook for 14-20 March with a 70% probability of below normal temperatures.

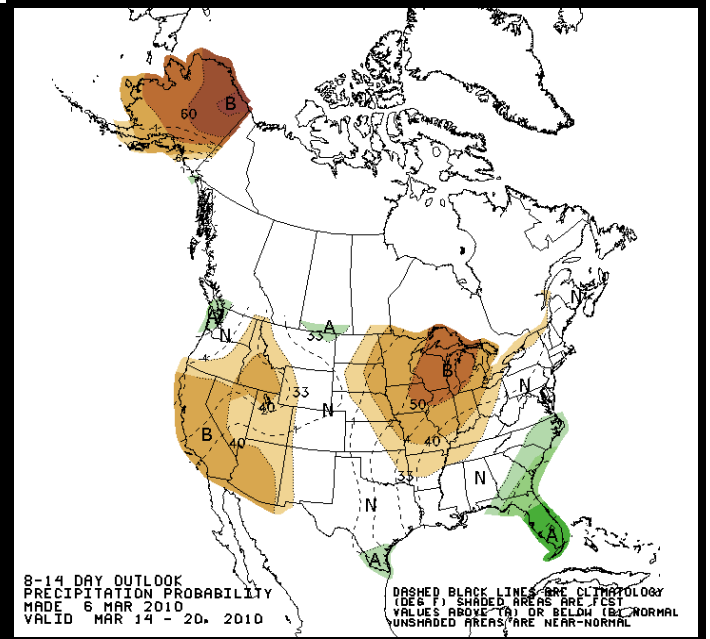


Figure 5. Fourteen day precipitation outlook for normal to 33% probability of above normal precipitation.

## March Climatology

March is the first month of meteorological spring with weather systems similar to that of February. Cool weather prevails during the first week, and then a warming trend becomes noticeable for the remainder of the month. Polar fronts and gulf low formation decrease in frequency. As the southerly flow returns, an increase in precipitation results in the wettest month of spring. Severe weather reaches its peak during March along the Gulf Coast and moves northwards over the course of late spring (March-May). Squall lines that form ahead of fast moving cold fronts are most likely to produce severe thunderstorms than any other spring month. Radiation fog becomes more common during the night and morning hours as the frequency of advection “sea” fog diminishes during the day.

Thunderstorm frequency averages 4 days during March and 9 days have measurable rainfall. Normal rainfall is 5.94 inches at Eglin AFB and 6.52 inches at Niceville recording stations. The maximum 24-hour Eglin AFB rainfall is 9.32 inches recorded on March 13, 1986. Record March (Eglin AFB) rainfall is 14.56 inches (2005). The driest March (Eglin AFB) produced 0.42 inch in 1967.

Average monthly temperatures in Niceville range from maximums of 70°F to minimums of 46°F. The record high is 87°F (March 22, 1982) and the record low is 19°F (March 3, 1980). Minimum temperatures below 32°F average 3 days during March. The average date of the last freeze at the start of the growing season occurs on March 15 in Niceville.

Relative humidity (RH) averages 70%. RH > 70% occurs 57 percent of the time. The highest hourly humidity (average RH = 81%) occurs between the hours of 3 and 5 a.m. Surface winds are calm or northerly during the nighttime and morning hours. Afternoon southerly winds occur with speeds averaging 10 mph during the early afternoon. Highest March wind gust was 59 m.p.h. in 1948 from the southwest (Eglin AFB).

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 Squadron, Mobile National Weather Service, NOAA Climate Prediction Center, Southeast Regional Climate Center, Community Collaborative Rain, Hail, & Snow (CoCoRaHS) Network, and the Florida Division of Forestry websites. Special thanks given to Major Michael Scott, Meteorologist at the 46<sup>th</sup> Weather Squadron, Eglin, AFB and Ray Ball, Information Technology Officer at Mobile NWS for providing additional assistance.