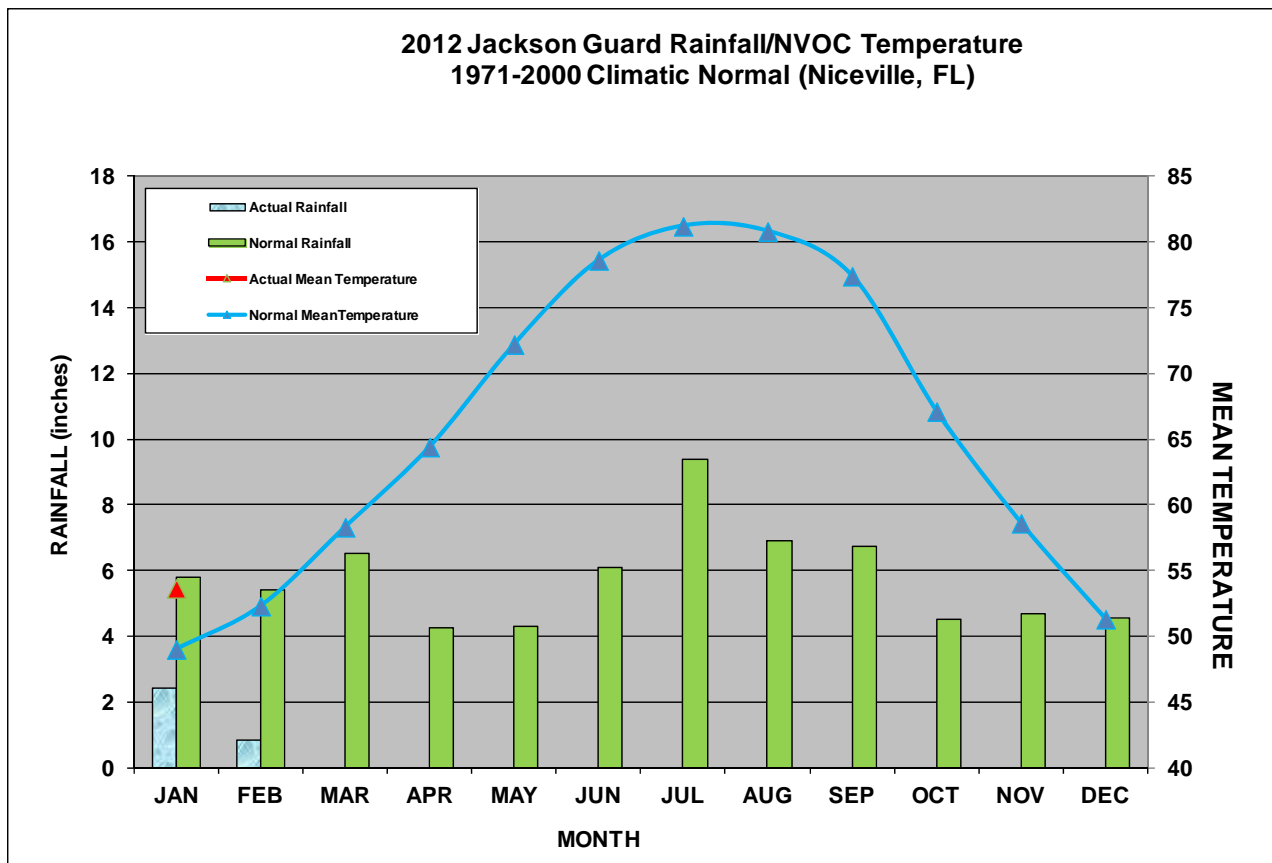


## Introduction

January 2012 produced above normal temperatures and below normal precipitation for Niceville, FL. Continuing since last December through mid January, the Arctic Oscillation (AO) took on the second most extreme positive phase. The pressure difference between the Azores High and the Icelandic Low reached its most extreme value since records began in 1865, keeping the winds of the jet stream flowing rapidly. This pattern bottled the jet stream far to the north in Canada, and prevented cold Arctic air from spilling southwards into the U.S. The combination of a near record-strength AO and a borderline moderate La Niña generated the unseasonable warm conditions. Cold fronts cleared the Florida panhandle on the 1<sup>st</sup>, 11<sup>th</sup>, 12<sup>th</sup>, 18<sup>th</sup>, & 27<sup>th</sup> January. One warm front moved northward on the 25<sup>th</sup> January. Two brief episodes of Arctic air occurred on 4-5<sup>th</sup> and 14-15<sup>th</sup> January when morning lows fell to lower to mid 20's. The coldest temperatures of the month produced morning lows of **20°F** in Niceville 4 & 5<sup>th</sup> January 2012. Overall, the mean temperature averaged as the *thirteenth warmest* January in Niceville since temperature record keeping began in 1940. Rainfall was frequent, but amounts were generally under an inch as weather systems moved quickly through the area. January 2012 rainfall was the *seventeenth driest* in Niceville since record keeping began in 1927. A rare EF3 produced winds in excess of 150 m.p.h. in Jefferson and Tuscaloosa Counties, AL causing several fatalities and over 100 injuries in central Alabama. On 26<sup>th</sup> January, a squall line of damaging thunderstorms produced 58 m.p.h. winds in Destin (Okaloosa County), downed a large tree across U.S. Hwy. 331 west of Liberty Hill (Walton County) and pushed an oak tree on a car near the intersection of U.S. Hwy. 319 & 27 in Tallahassee (Leon County), FL. No injuries were reported.



## January 2012 Climate Summary

Jackson Guard rainfall for January totaled **2.42** inches and the Niceville (NVOC) Regional Sewer Board, Inc. recorded **4.32** inches. Eglin AFB recorded **2.35** inches for the month, 2.21 inches *below* the average (1940-2011) of 4.56 inches. Pensacola, FL recorded **2.49** inches, which is 2.14 inches *below* the normal (1981-2010) of 4.63 inches. There were 7 days with measurable precipitation at the NVOC, which is 1 day *below* average. There were 5 thunderstorm days, which is three days *above* normal. The heaviest rainfall was 0.95 inches measured on 18<sup>th</sup> January.

The [Keetch-Byram Drought Index](#) (KBDI) at the end of January 2012 was *very low* in Santa Rosa to *low* in Walton & Gulf to *normal* in Okaloosa. North Florida is wetter than the rest of the state where the greatest indices show moderate to severe fire danger present in south Florida. The values below are an indicator of soil moisture conditions in the counties containing Eglin AFB natural resources based upon reported rainfall. Please refer to Figure 1 for Doppler precipitation estimates.

Florida County	Average KBDI (1 February 2012)	Florida County	Average January 2012 Rainfall (inches)
Santa Rosa	145	Santa Rosa	2.46
Okaloosa	238	Okaloosa	2.26
Walton	165	Walton	2.38
Gulf	166	Gulf	2.14

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

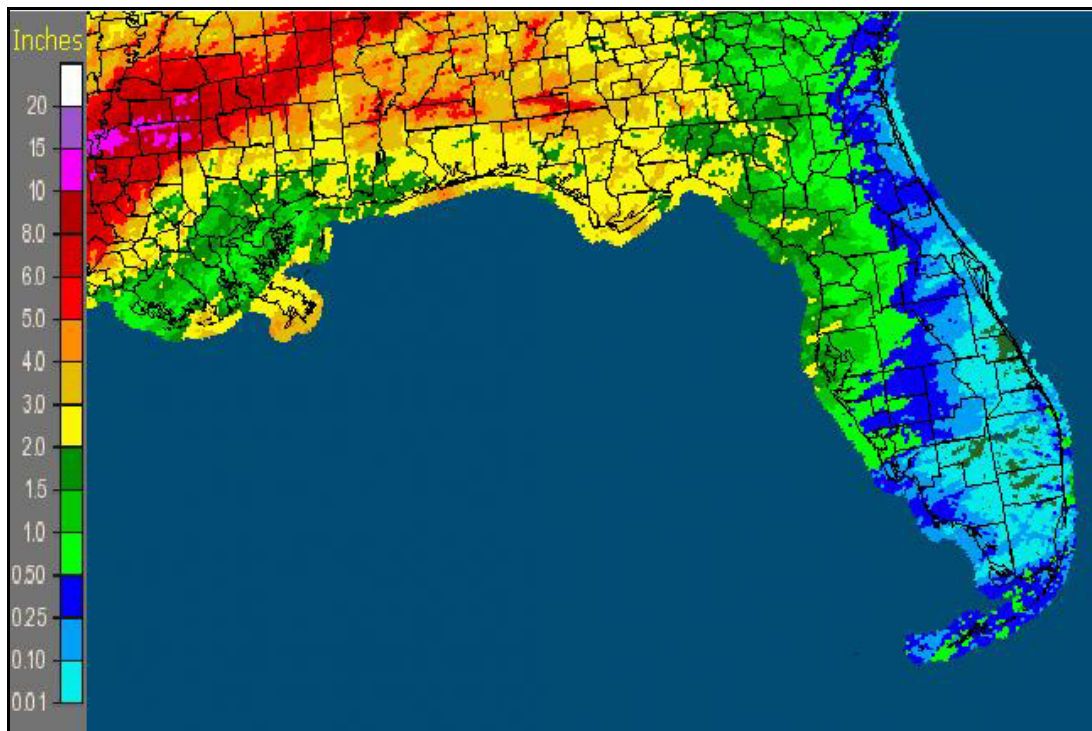


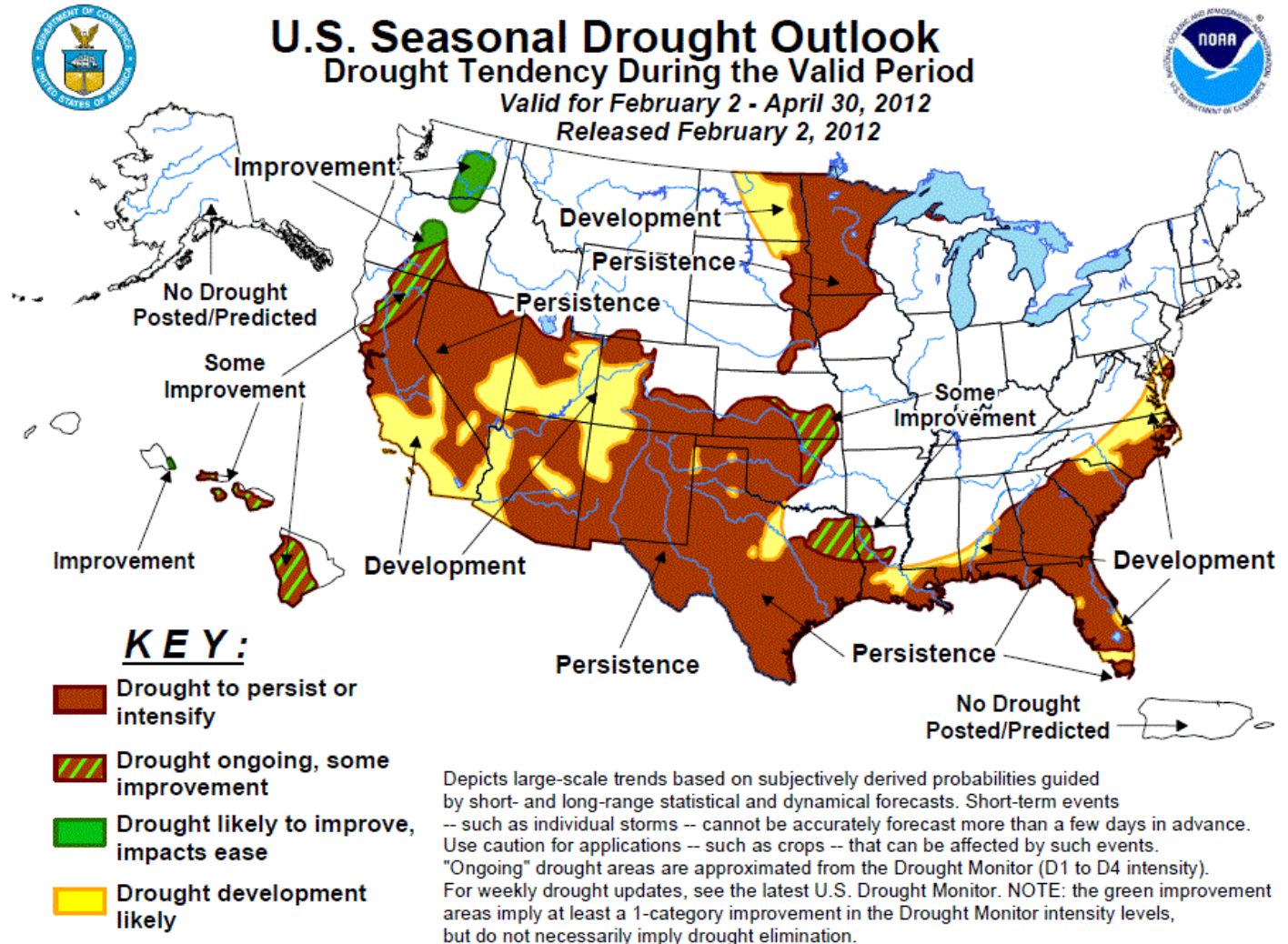
Figure 1. January 2012 Doppler precipitation showing a general area of rainfall between 1.5 to 3 inches (green to dark yellow) across the Florida panhandle. Isolated areas exceeding 5 inches (red) fell over northern Holmes County. The remainder of peninsular Florida received from 1.5 inches to less than a 0.1 inch (light blue).

The monthly mean temperature was **53.6°F** which was 4.6°F *above* normal. The average high temperature at NVOC was **65.6°F** (4.3°F *above* normal). The highest temperature of the month was 73°F observed on the 2<sup>nd</sup> January. The average low temperature was **41.6°F** (4.9°F *above* normal). The lowest temperature of the month was 20°F observed on 4<sup>th</sup> & 5<sup>th</sup> January. There were 11 mornings when the minimum temperature was ≤32°F, which is 1 days *below* normal. One record high minimum was established during the month when 65°F on 23<sup>rd</sup> January broke 61°F set back in 1999.

### La Niña Conditions and Drought Outlook

Sea surface temperatures (SST) remained 0.7°C to 1.2 °C below average across the equatorial

Pacific. Latest observations and model forecasts indicate that the current La Niña phase is near its nadir and favors drought persistence and development for the next 3 months across the southern U.S. (Figure 2). The model outlook for the upcoming summer and fall indicates that neutral SST conditions (anomalies between -0.5°C and +0.5°C) will be present for the upcoming tropical cyclone season. This trend suggests that neutral Pacific SST does not influence the Atlantic Hurricane Region. Continued below normal precipitation during 2012 probably will result in expanding drought across Florida. Frequent, yet light, rainfall was common across north Florida yielding amounts that were less than normal for the winter recharge period. La Niña precipitation forecasts strongly favor enhanced odds for below median precipitation; *forecast confidence for Florida is high* that drought will persist or intensify across Florida this spring. The Climate Prediction Center February–April outlook also indicates a high probability for below median precipitation across the Florida Panhandle where persistence is forecast.



### February Outlook

The Climate Prediction Center <http://www.cpc.ncep.noaa.gov/products/predictions/30day/> outlook for February 2012 predicts 40% to 50% probability for *above normal* temperatures and a 40% to 50% probability *below normal* rainfall for the north Florida.

### February Climatology

February is the last winter month with weather systems similar to that of January. Polar fronts arrive every four to five days. Low pressure systems occasionally form when the orientation of the jet stream traverses the Gulf of Mexico or induces a wave along a stationary front. These weather systems result in steady and showery weather producing moderate to heavy precipitation. Severe weather is infrequent, but

can occur as a squall line ahead of a cold front producing strong winds or, in rare instances, tornadoes. Visibility becomes obstructed due to fog an average of 17 days. Advection or “sea” fog (warm Gulf of Mexico air moving over the cooler coastal region) most often forms during the afternoon and can persist for several days. Morning fog caused by radiational cooling following cold fronts is also common. Low-level stratus clouds usually remain once surface visibility becomes unrestricted.

Thunderstorm frequency averages 3 days during February and 9 days have measurable rainfall. Average rainfall is **4.79** inches at Eglin AFB (1940-2011) and **5.39** inches is the Niceville normal (1971-2000). The maximum 24-hour Eglin AFB rainfall is 5.86 inches recorded on February 1, 1983. At Niceville the record 24-hour rainfall is 8.30 inches observed on February 16, 1970. Record Niceville February rainfall is 12.78 inches (1979). The driest February in Niceville produced 0.26 inch in 1951. Snowfall has been recorded only three years since record keeping began in 1940 at Eglin AFB. Maximum Eglin snowfall of 1.3 inches fell February 9, 1973.

Average monthly temperatures for Niceville range from 65°F to 40°F. The record high is 83°F (February 24, 1980) and the record low is 11°F (February 3, 1951). Minimum temperatures below 32°F average eight days during February.

Relative humidity (RH) averages 70%. RH > 70% occurs 54 percent of the time. The highest hourly humidity (average RH = 78%) occurs between the hours of midnight and 8 a.m.

Surface winds are primarily northerly during the day with speeds averaging up to 9 m.p.h. Frontal waves and gulf lows alter winds to an easterly or southerly component. Highest February wind gust was 59 m.p.h. in 1983 from the west.

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, Community Collaborative Rain, Hail, & Snow Network, and the Florida Forest Service websites.