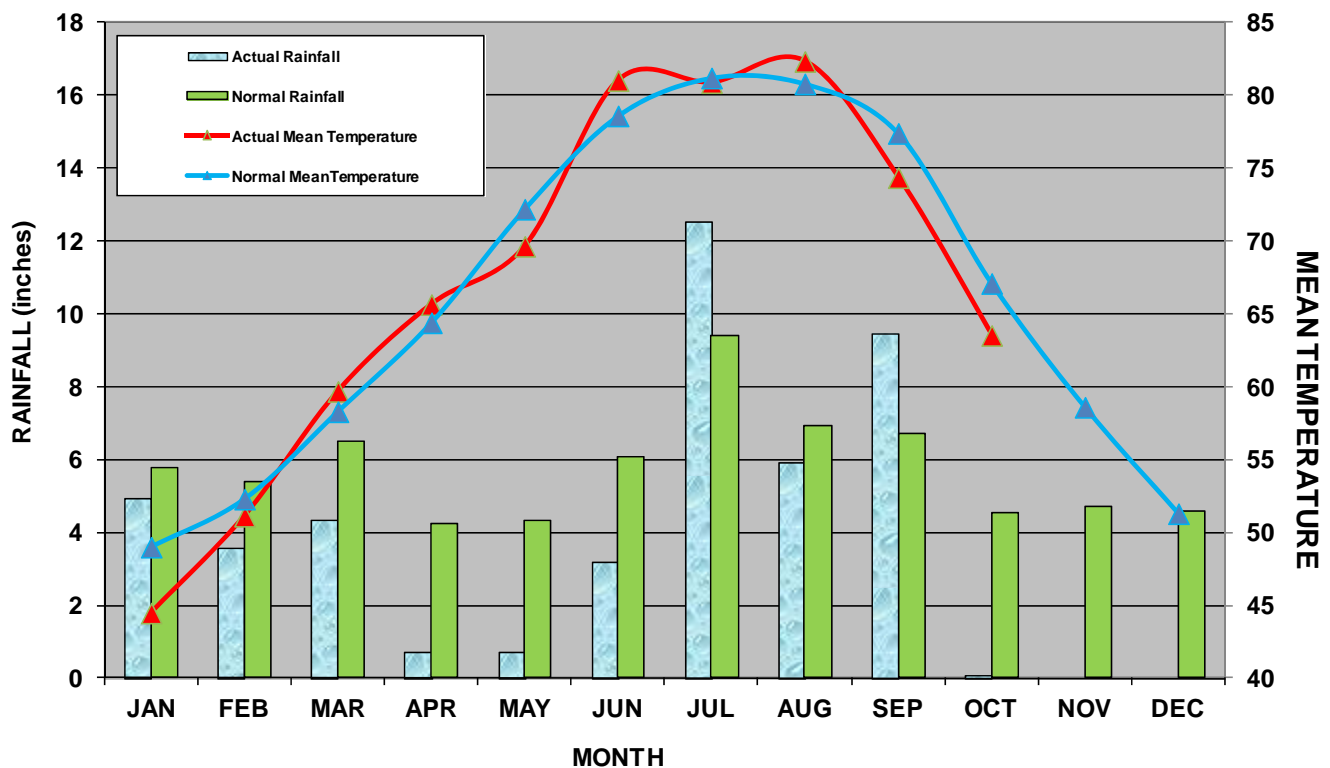


Introduction

October 2011 produced much below normal temperatures and precipitation. The weather was unusually tranquil with no thunderstorms and only two days with measureable rainfall marking the 7th driest October at Eglin AFB since 1978. The western FL panhandle experienced the driest month of the year with less than 0.25 inch of rain recorded area wide. Severe drought returned to the western FL panhandle including the entire Eglin AFB reservation. To the east, extreme drought conditions are present in Walton, Holmes, Washington, Bay, and Jackson Counties. This stable “chamber of commerce” weather also produced nearly ideal (cool overnight and warm daytime) temperatures with the average daily temperature near 65°F. As a result of the very dry and cool weather, Niceville experienced its 6th coolest October since 1987. Three cold fronts cleared the area on the 13th, 19th, and 28th October. The first half of the month was dominated by continental high pressure and daytime temperatures reached into the upper 80’s falling off to the lower 80’s and middle 70’s for warmest part of the month. A slow moving surface low impacted the east FL coast with heavy rain on the 8th October and moved westward to Panama City, FL by the 11th October. The low eventually looped eastward over the FL Big Bend on the 12th October with the tropical moisture clearing with 13th October cold front. Another gulf low formed by the 18th October south of Apalachicola, FL. This storm produced torrential rainfall of 7.49 inches which became the *fourth wettest day* of record and the wettest day since 2nd October 1996 when 10.67 inches fell at Apalachicola. Strong wind shear aloft prevented both gulf lows from developing tropical characteristics. A polar air mass brought the coolest temperatures down to the mid 30’s from 21st through 25th October. By the end of the fourth week, warm and humid conditions returned. The Bermuda high established a ridge of high pressure ahead of the 28th October cold front, but rainfall was light and spotty in coverage. A shallow polar air mass settled over the local area at month’s end and a few locations in Okaloosa County experienced a rare, early-season frost with Crestview recording 30°F and Duke Field bottoming out at 28°F on the 30th October.

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



October 2011 Climate Summary

Jackson Guard rainfall for October totaled **0.07** inches and the Niceville (NVOC) Regional Sewer Board, Inc. also recorded **0.07** inches. Eglin AFB recorded **0.10** inches for the month, *3.74* inches *below* the normal of 3.84 inches. Pensacola, FL recorded **0.24** inches, which is *5.00* inches *below* the normal of 5.24 inches. There were 2 days with measurable precipitation in Niceville, which is 3 days *below* the October average. There were no thunderstorm days which is 1 day *below* normal. Year to date rainfall at NVOC is **46.19** inches, which is *13.74* inches below normal of 59.93 inches. Year to date rainfall at Eglin AFB is **51.63** inches, which is *2.30* inches below the normal of 53.93 inches. Year to date rainfall at Pensacola, FL is **39.20** inches, which is *16.79* inches below the normal of 55.99 inches.

The [Keetch-Byram Drought Index](#) (KBDI) at the end of October 2011 was *moderate to severe*. Dry conditions should persist through the winter months as a moderate La Niña event will bring much drier and warmer conditions to the local region. The values below reflect the soil moisture conditions in the counties containing Eglin AFB natural resources.

Florida County	Average KBDI (31 October 2011)	Florida County	Average October 2011 Rainfall (inches)
Santa Rosa	507	Santa Rosa	0.16
Okaloosa	522	Okaloosa	0.14
Walton	605	Walton	0.29
Gulf	428	Gulf	5.35

For more information on daily KBDI values, visit the Florida Forest Service: [KBDI index](#).

The monthly mean temperature was **63.5°F** which was *3.6°F below* normal. The average high temperature at Niceville NVOC was **77.7°F** (*2.8°F below* normal). The highest temperature of the month was **87°F** observed on the 1st & 2nd October. The average low temperature was **49.4°F** (*4.4°F below* normal). The lowest temperature of the month was **35°F** observed on the 21st, 22nd, 23rd, 24th, & 25th October. No new records were established.

Tropical Summary October 2011

Only one named storm formed during the month, which became Hurricane Rina between 23-28 October with maximum winds up to 110 m.p.h. east of the Yucatan Peninsula. Tropical Storm Philippe formed during September and became a hurricane on 6-7 October over the western Atlantic. This activity is close to the long-term (1944-2010) average of two tropical storms and one hurricane. These hurricanes were Category 1 & 2 and were confined to the Atlantic and the eastern Caribbean region. The accumulated cyclone energy (ACE) which measures the combined intensity and duration of tropical storms and hurricanes was 85% above normal of the long-term October mean.

November Outlook

The Climate Prediction Center <http://www.cpc.ncep.noaa.gov/products/predictions/30day/> outlook for November 2011 forecasts a 40% probability of below normal rainfall and temperatures for the western Florida panhandle. For the official winter outlook for December 2011 – February 2012, see Figures 1 & 2 below.

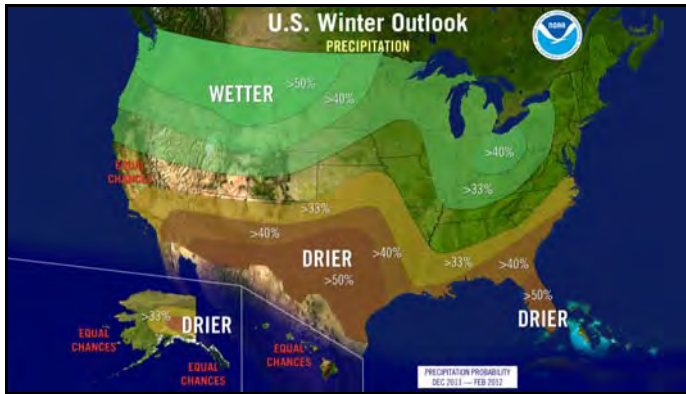


Figure 1. U.S. winter precipitation (December through February) prediction indicates a >40% probability for a drier than normal season across north Florida.

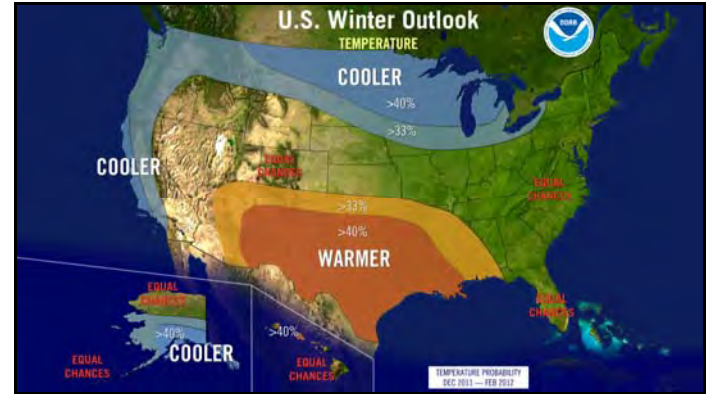


Figure 2. U.S. winter temperature (December February) prediction calls for a >33% probability for a warmer than normal season across the northwest Florida.

Seasonal Drought Outlook Due to the Ongoing La Niña

The La Niña phenomenon recently strengthened and remains well-established in the Pacific. Given the current moderate strength of the event (-1.1°C sea surface temperature departure), this La Niña is expected to persist into spring 2012. Continued dryness over the past 30 days (Figure 3) intensified drought conditions across the lower Mississippi Valley eastward to Alabama. Tropical moisture across south Florida produced 8 to 15+ inches of rainfall. Drought will continue where severe to extreme conditions are now present (Figure 4). Therefore, forecast confidence in the current drought outlook (Figure 5) is **high** according to the National Weather Service Climatic Prediction Center.

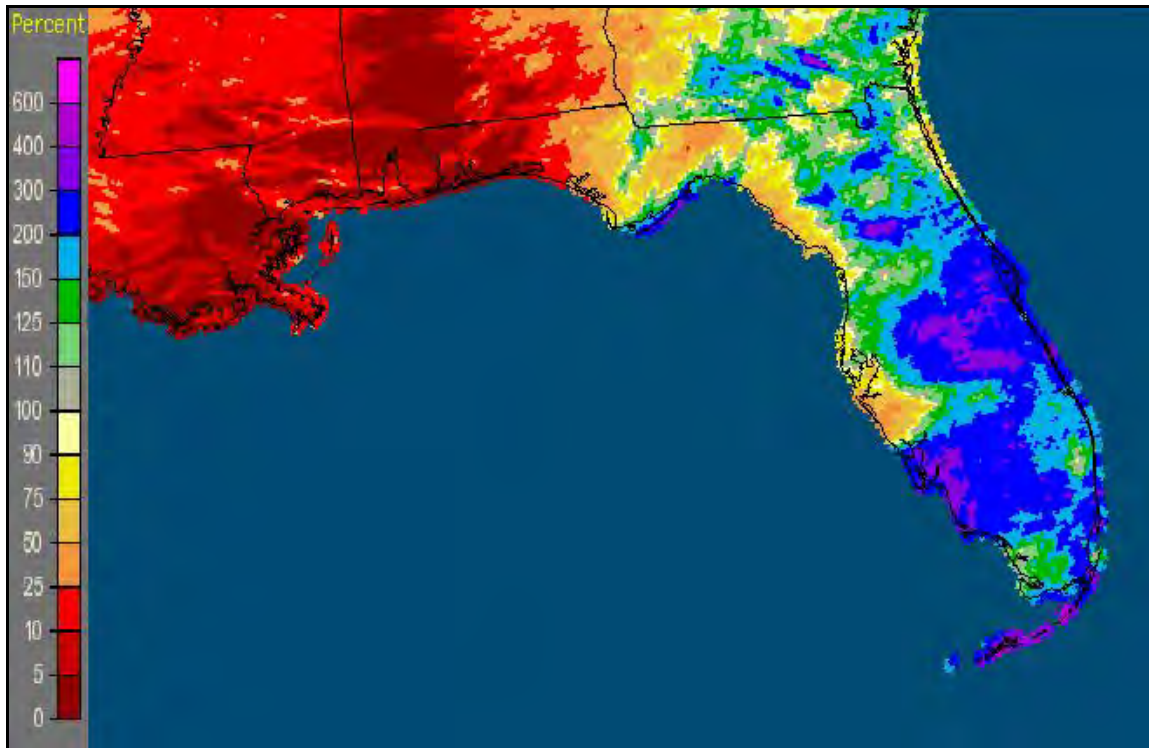


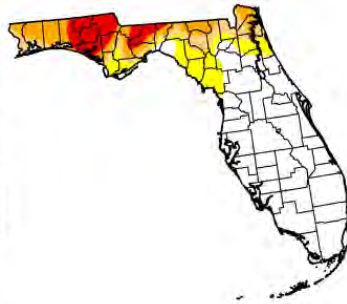
Figure 3. October 2011 Florida percent of normal rainfall. The western Florida panhandle received less than 5% (dark red) of normal rainfall. South Florida received 200% (blue) to 600% (violet) due to two extratropical storm events. Credit NOAA

U.S. Drought Monitor

Florida

November 1, 2011
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D1	D2-D3	D3-D4	D4	D4
Current	62.98	37.02	26.16	18.36	7.98	0.00
Last Week (10/25/2011 map)	63.01	36.99	24.61	15.06	7.98	0.00
3 Months Ago (8/02/2011 map)	11.34	88.66	65.92	47.37	17.72	0.00
Start of Calendar Year (12/25/2010 map)	0.18	99.82	86.04	80.84	20.21	0.00
Start of Water Year (09/27/2011 map)	43.12	56.88	28.83	16.65	7.85	0.00
One Year Ago (10/26/2010 map)	21.24	78.76	41.73	23.98	3.91	0.00



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://droughtmonitor.unl.edu>



Released Thursday, November 3, 2011
Brian Fuchs, National Drought Mitigation Center

Figure 4. Current Florida drought conditions. Northwest Florida has severe (D2-brown) to extreme (D3-red) drought conditions.

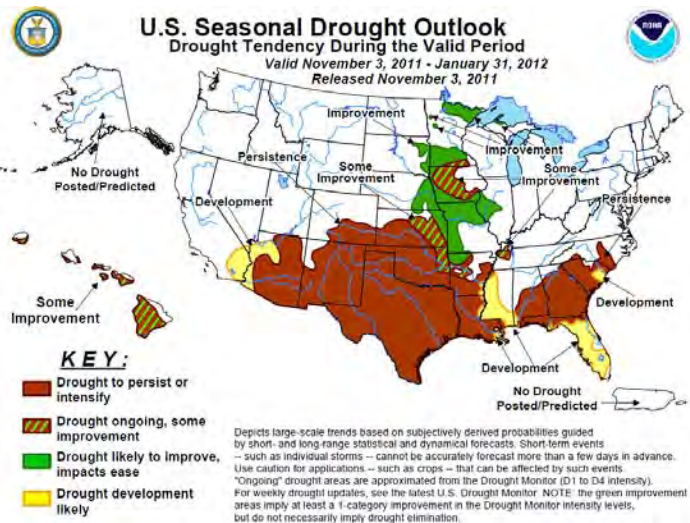


Figure 5. Winter drought outlook November 2011 through January 2012.

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. Tropical cyclone formation markedly decreases during the month as wind shear and cooler waters enter the Gulf of Mexico. The Atlantic hurricane season officially ends at the end of the month. Frontal passages are the chief precipitation source 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 **3.98** inches at Eglin AFB (climatic average 1940-2010) 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 12th November and the first hard freeze (<28°F) is 7th 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. NVOC Regional Water Sewer Board, Inc. in Niceville, FL provided the temperature and additional rainfall data. Other reports were obtained from Eglin AFB 46th Weather Flight, National Weather Service-Mobile, NOAA Climate Prediction Center, National Hurricane Center, Southeast Regional Climate Center, Florida Division of Forestry, and the Community Collaborative Rain, Hail, & Snow Network (CoCoRaHS.org) websites.