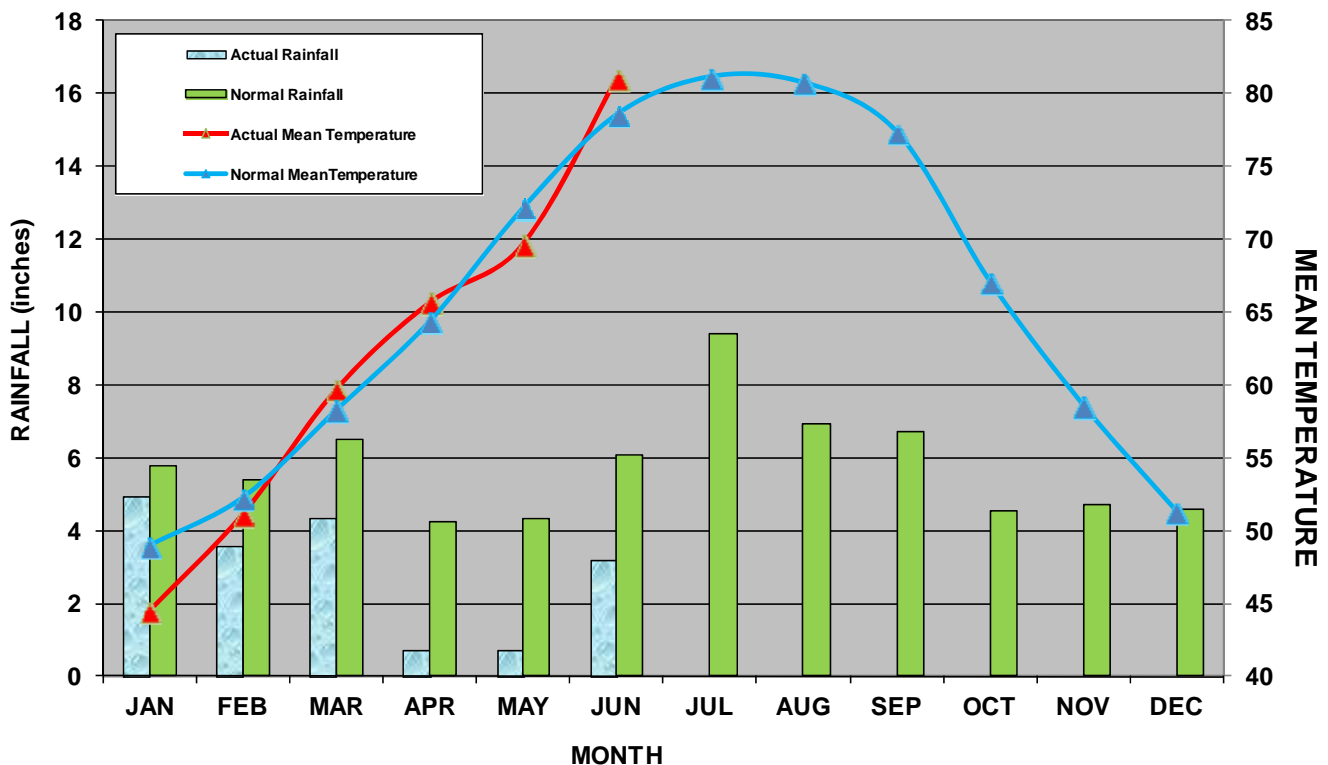


## Introduction

June 2011 produced above normal temperatures and below normal precipitation for Niceville, FL (see graph below). An upper level high pressure ridge remained entrenched across the southern U.S. Plains through the southeast U.S. The weather produced numerous days exceeding 100°F across inland areas away from the coast. Overnight lows stayed in upper 70°F's to yield oppressively hot conditions and record daytime and monthly records. Only one cold front cleared the FL panhandle on the 30<sup>th</sup> June and later retreated northward as a warm front later on the 30<sup>th</sup> June. All time high temperature records for June were broken in Mobile, AL and Tallahassee, FL. On 4<sup>th</sup> June, Mobile Regional Airport reached **103°F** breaking the old record (102°F) set in 1954, 1952, and 1936. On 15<sup>th</sup> June 2011, Tallahassee recorded **105°F** breaking all their previous records for highest temperature. The old record (104°F) was previously set back on 20<sup>th</sup> June 1933 with Tallahassee records dating back to 1892. Tropical moisture and an active sea breeze regime brought numerous severe thunderstorms to numerous areas across the Florida panhandle, but the prolonged regional drought (Figures 1 & 2) worsened to levels not seen since June 1998. Rainfall averaged near half the normal (6 inch) precipitation, a slight improvement over the extremely dry April-May months when only 2 inches fell. Coverage was sporadic and spotty throughout the month with partial recovery due to isolated torrential downpours. Only two small areas of Okaloosa County (south of Crestview near Interstate 10) received between 9 to 10 inches for the month. The current drought is now at the highest level (D-4) classified as *exceptional*, the highest category of drought. As with this level of drought, local impacts are beginning to be felt. Northwest Florida Water Management District has issued a water shortage warning and is requesting a volunteer reduction in water use. Several counties issued burn bans on outdoor burning to include campfires. On 25<sup>th</sup> June, an unattended fire grill created a 1000+ acre wildfire in Gulf State Park in Orange Beach, AL. By the 26<sup>th</sup> June, a significant amount of drift smoke impacted the coastal region, reduced visibility and caused concern about the dry conditions.

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



## June 2011 Climate Summary

Jackson Guard rainfall for June totaled **3.19** inches and the Niceville (NVOC) Regional Sewer Board, Inc. recorded **3.53** inches. This was the 23<sup>rd</sup> driest June at both Niceville and Eglin AFB. Eglin AFB recorded **3.47** inches for the month, 2.34 inches *below* the normal of 5.81 inches. Pensacola, FL recorded **1.64** inches, which is 4.75 inch *below* the normal of 6.39 inches. There were 10 days with measureable rainfall recorded at Niceville (*one day above normal*) with 15 days reported with thunder (*four days above normal*). The heaviest rainfall at the Niceville NVOC was 1.16 inches recorded on the 29<sup>th</sup> June. Year to date rainfall at Eglin AFB is **21.45** inches, which is 7.54 inches below the normal of 28.99 inches. Year to date rainfall at Pensacola, FL is **18.96** inches, which is 12.14 inches below the normal of 31.10 inches.

The monthly mean temperature was **81.0**°F which was 2.4°F *above* normal. This was the *eighth* warmest June with records dating back to 1938. The average high temperature at Niceville NVOC was **90.6**°F (0.9°F *above* normal). The highest temperature of the month was 98°F observed on the 2<sup>nd</sup> June. There were 16 days when the maximum temperature reached 90°F or above, which was 2 days *above* normal. The average low temperature was **71.1**°F (3.6°F *above* normal). Two record high minimum temperatures were established on 16<sup>th</sup> June when 76°F broke 75°F (2001) and on 20<sup>th</sup> June when 77°F broke 76°F (2009).

The [Keetch-Byram Drought Index](#) (KBDI) at the beginning of July 2011 was very high. Average Eglin AFB rainfall was **3.48** inches for June 2011. The Florida Forest Service's [fire weather outlook](#) for the summer 2011 forecasts an “*above normal*” risk for fire danger due to high KBDI and no clear signal for higher than normal rainfall. Despite this unfavorable forecast, Eglin AFB's aggressive prescribed fire program produced a positive benefit during this period of high fire danger: a significant lowering of both the number and severity of wildfires on Eglin AFB reservation impacting neighboring communities.

Florida County	Average KBDI	Florida County	Average June 2011 Rainfall (inches)
Santa Rosa	620	Santa Rosa	2.43
Okaloosa	643	Okaloosa	3.34
Walton	642	Walton	3.10
Gulf	580	Gulf	2.94

### U.S. Drought Monitor

June 28, 2011  
Valid 7 a.m. EST

#### Southeast

	Drought Conditions (Percent Area)					
	None	D0-D1	D1-D2	D2-D3	D3-D4	D4
Current	15.61	84.39	62.63	44.22	29.11	14.73
Last Week (06/21/2011)	14.45	85.55	63.25	44.97	29.67	15.08
3 Months Ago (03/29/2011)	22.51	77.49	53.24	22.40	6.25	0.00
Start of Calendar Year (12/28/2010)	23.01	76.99	51.84	23.55	5.63	0.00
Start of Water Year (09/28/2010)	18.18	81.82	38.04	10.32	0.90	0.00
One Year Ago (06/22/2010)	91.53	8.47	0.00	0.00	0.00	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://drought.unl.edu/dm>



Released Thursday, June 30, 2011  
Richard Heim/Liz Love-Brotak, NOAA/NESDIS/NCDC

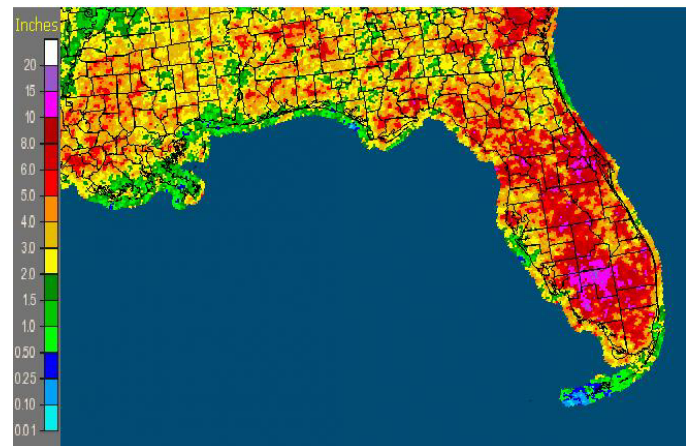
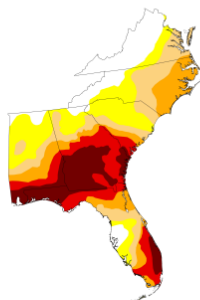


Figure 1. Current drought classification as exceptional (dark red) across northwest and southeast FL. Figure 2. June 2011 observed monthly rainfall (dark yellow to light red = 2 to 6 inches).

Streamflow during July will experience a slow but steady decline in levels. Of course, this is highly dependent on the amount of rain received as seen by recent rainfall in the Yellow River (Figure 4). The long-term lack of rainfall over the areas of exceptional drought is clearly showing up in extremely low stream flow. Severe to extreme hydrologic drought conditions are being observed in the Yellow and Choctawhatchee Rivers. This is evident in the discharge of the lowest flow depicted as the green line

showing the 7-day 10 year average discharge as measured in cubic feet per second (cfs) or about 8 gallons per second (Figures 3 & 4).

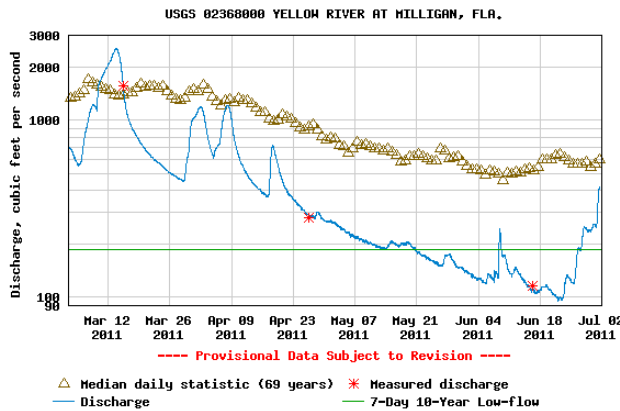


Figure 3. Yellow River record low discharge on 23<sup>rd</sup> June 90 cfs.

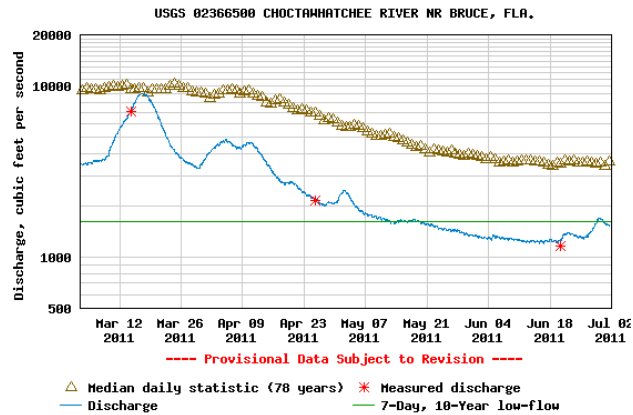


Figure 4. Choctawhatchee River discharge on 18 June near 1050 cfs.

### June 2011 Significant Weather Events

Numerous records of excessive heat and severe thunderstorms were noted during the month. Below is the table of events:

Date	Town (County)	Type of Event/Description
1 June	Marianna (Jackson) Tallahassee (Leon) Crestview (Okaloosa) Eglin AFB(Okaloosa)	Excessive Heat/105°F Excessive Heat/103°F Record Excessive Heat/102°F Excessive Heat/101°F
4 June	Crestview (Okaloosa) Pensacola (Escambia) Eglin AFB(Okaloosa)	Excessive Heat/104°F Excessive Heat/102°F Tied for all-time June maximum temperature. Excessive Heat/101°F
5 June	Tallahassee (Leon)	Severe Thunderstorm/Trees down near Campbell Stadium.
6 June	Alford, Marianna (Jackson)	Severe Thunderstorm/Numerous trees downed across eastern part of the county.
6 June	Fountain (Bay) Bellview (Escambia)	Severe Thunderstorm/Trees down Severe Thunderstorm/Golf ball (1.75 inch) size hail
7 June	Callaway, Lynn Haven (Bay)	Severe Thunderstorm/Trees down on car and on roadways
8 June	Crestview (Okaloosa) Molino (Escambia)	Severe Thunderstorm/Half dollar (1.25 inch) size hail/ Torrential Rainfall/3.90 inch rainfall Severe Thunderstorm/Quarter (1.0 inch) size hail
13 June	Crestview (Okaloosa) Crystal Lake (Bay) Pace (Santa Rosa)	Excessive Heat/100°F Severe Thunderstorm/Quarter (1.0 inch) size hail/Damage to carport. Severe Thunderstorm/Top of barn blown off onto vehicle.
14 June	Marianna (Jackson) Tallahassee (Leon)	Excessive Heat/104°F Excessive Heat/103°F Record
15 June	Marianna (Jackson) Tallahassee (Leon)	Excessive Heat/105°F Excessive Heat/105°F All time June Maximum Temperature Record.
17 June	Bascom (Jackson)	Severe Thunderstorm/Trees & power lines down NE portion of county.
23 June	Duke Field (Okaloosa)	Torrential Rainfall/4.05 inch, C-64 recorded 4.75 inches in 2 hours
24 June	Panama City Airport (Bay)	Severe Thunderstorm/76 m.p.h. gust flipped over one Cessna aircraft and moved several other small aircraft.

26 June	Tallahassee (Leon) DeFuniak Springs, Ponce De Leon (Walton)	Severe Thunderstorm/Numerous trees downed across town Severe Thunderstorm/ Quarter (1.0 inch) hail & 50 m.p.h. wind gusts Severe Thunderstorm/ Quarter (1.0 inch) hail & 45 m.p.h. wind gusts
27 June	Fountain (Bay) Lloyd (Jefferson) Chaires Crossroads (Leon)	Severe Thunderstorm/ Golf ball (1.75 inch) size hail Severe Thunderstorm/Trees down on power lines Severe Thunderstorm/Numerous trees down Severe Thunderstorm/65 m.p.h.
28 June	DeFuniak Springs (Walton)	Severe Thunderstorm/Recreational vehicles overturned, power lines down on vehicles, tree downed on house along U.S. 90
30 June	Tallahassee, Southwood, Woodville (Leon) Crawfordville (Wakulla)	Severe Thunderstorm/Winds up to 64 m.p.h. More than a dozen separate reports of trees down blocking roads. Severe Thunderstorm/Several reports of down trees and power lines

## July Climatology

July is the wettest month of the year as well as the hottest. A maritime tropical airmass dominates the hot, humid weather pattern as the Gulf of Mexico warms to near 85°F. The landbreeze-seabreeze phenomenon is well established and continues through August. Afternoon thunderstorms push inland with the seabreeze and early morning thunderstorms form offshore with the landbreeze and occasionally drift over the coast. Thunderstorm frequency averages 18 days with 14 days of measurable rain. There is 32% frequency of occurrence of a thunderstorm between 1200 to 1700 hours, the highest of the year. Rainfall averages **7.59** inches at Eglin AFB (climatic period 1940-2009) and **9.40** inches at Niceville recording stations (climatic normal 1971-2000). The maximum 24-hour Eglin AFB rainfall is 5.90 inches recorded on July 30, 1975. Record July rainfall is 19.88 inches (1975) at Eglin AFB and 31.42 inches (1994) at Niceville. The driest July produced only 0.66 inch in 1986 at Eglin AFB and 2.62 inches (1972) at Niceville.

Average monthly temperatures range from **71°F** to **91°F**. The Eglin AFB record high is 106°F (July 14, 1980) and the record low is 60°F (July 14, 15, 1967 & June 23, 1947). The Niceville record high is 107°F (July 15, 1980) and the record low is 55°F (July 16, 1967). High temperatures average 90°F or above for 14 days, and rise above 95°F an average of two days during July. Low temperatures do not fall below 70°F during the month.

Relative humidity (RH) averages 74%. RH > 70% occurs 64 percent of the time. The highest hourly humidity (average RH = 84%) occurs between the hours of 3 and 5 a.m.

Surface winds are calm or northerly during the nighttime and early morning hours. Afternoon southerly winds occur with the speed averaging between 8 to 11 mph during the afternoon.

## July Outlook

The Climate Prediction Center [30-Day Outlook](#) for July 2011 predicts a 40% probability for above normal temperatures and a 40% probability for below normal precipitation for the Florida panhandle.

This information was compiled from Jackson Guard rainfall observations. Other reports were obtained from Eglin AFB 46<sup>th</sup> Weather Squadron, Mobile National Weather Service, NOAA Climate Prediction Center, National Hurricane Center-Tropical Prediction Center, Southeast Regional Climate Center, and the Florida Forest Service. NVOOC Regional Water Sewer Board, Inc. in Niceville, FL provided the temperature and rainfall data. Jackson Guard is a member of the Community Collaborative Rain, Hail, & Snow Network ([www.CoCoRaHS.org](http://www.CoCoRaHS.org)).