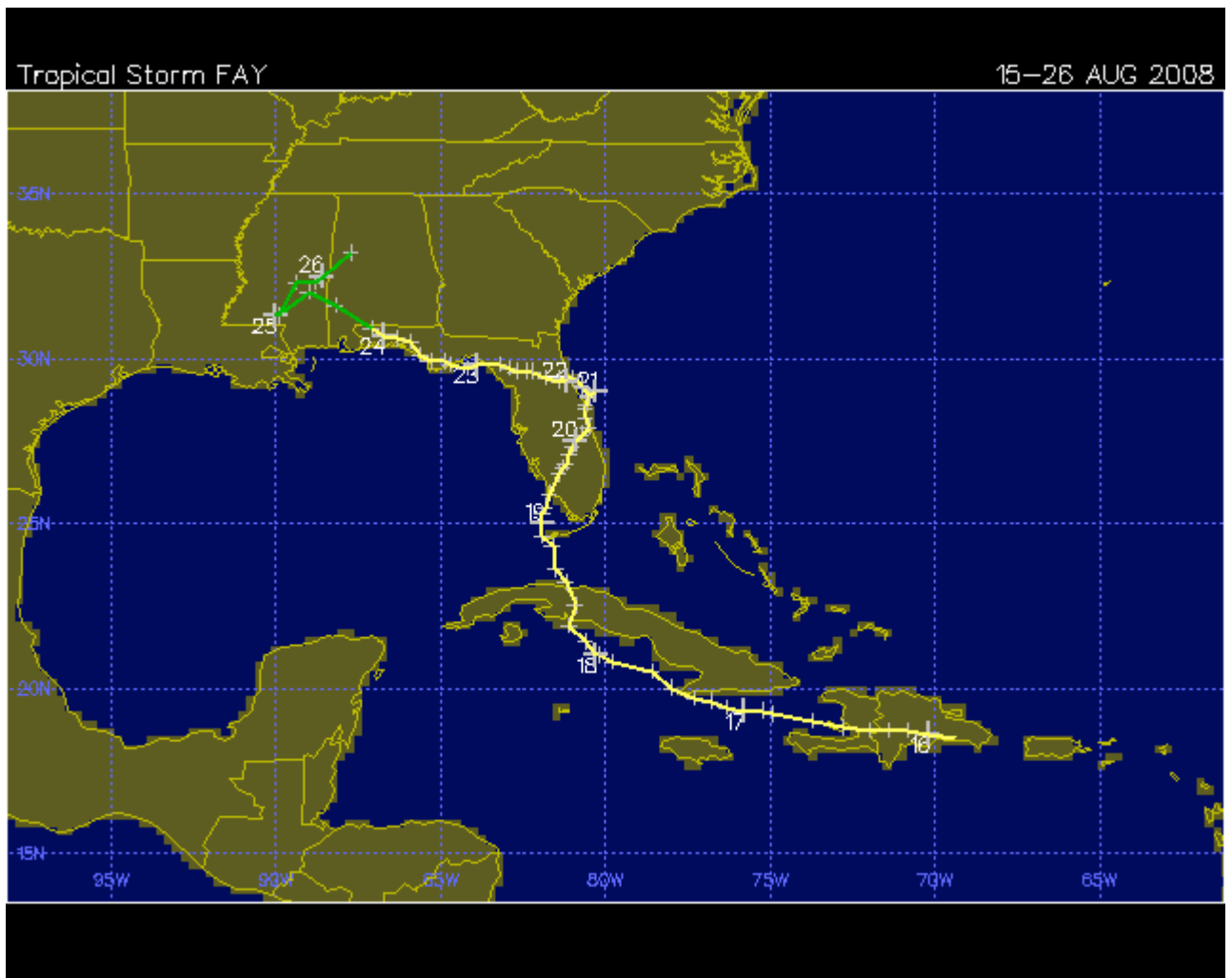


SECC Climate Update – T. S. Fay Impacts

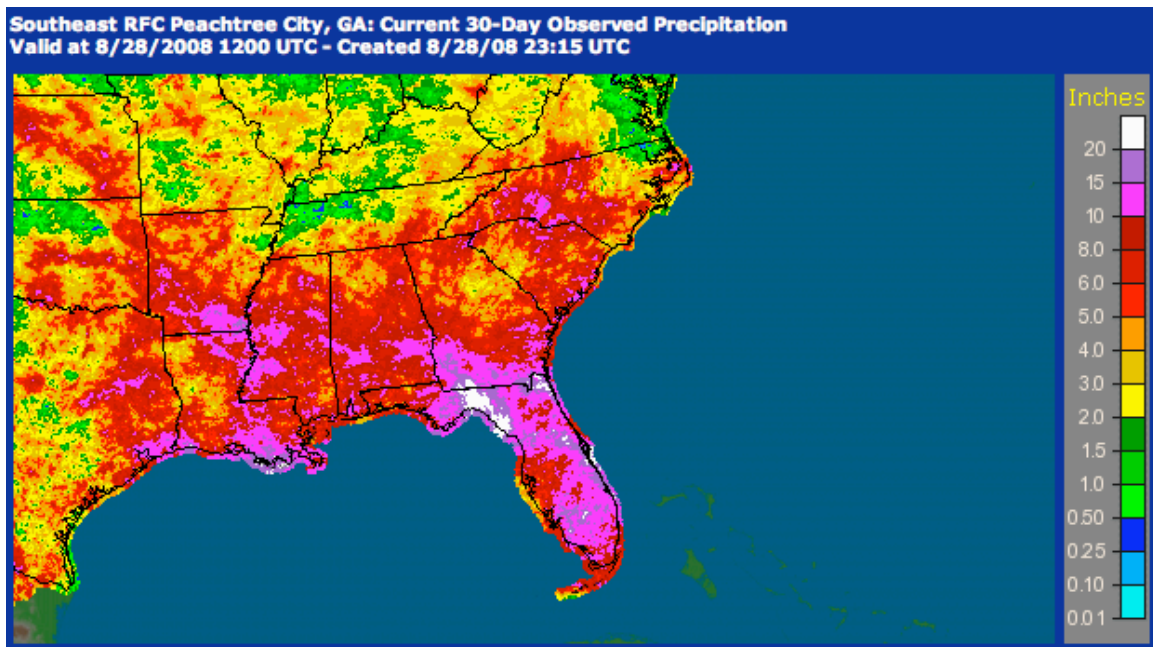
Date updated: August 29, 2008

Tropical Storm Fay takes an erratic path. With its erratic track and slow movement, Fay crossed the state and made a total of 4 separate landfalls. The first was on 8/18 as the center passed over Key West, FL. Camp Romano, FL was the site of the second landfall on 8/19. Then on the 21st, Fay came back ashore near Flagler Beach before entering the Gulf of Mexico and making its fourth landfall along the Coast of Franklin County, north of Apalachicola, early on the 23rd.



Tropical Storm Fay storm track (Courtesy of Unisys).

Can Tropical Storm Fay be considered a drought-buster? In Florida, the answer is a resounding “yes”. Fay may be considered one of the wettest storms on record when considering the widespread coverage of heavy rain that affected our three states. Rainfall totals from 8 to 12 inches were common across most of Florida, while the areas around Melbourne, Tallahassee, and the Big Bend saw totals over 20 inches. Lake Okeechobee has risen nearly 3 feet since the storm and South Florida Water Management District claims the highest 7-day rise in history. The lake, which drives water availability for irrigation in the south Florida area, is now at normal levels and the highest since May of 2006. Only west-central Florida and parts of the Panhandle received less than 5 inches.

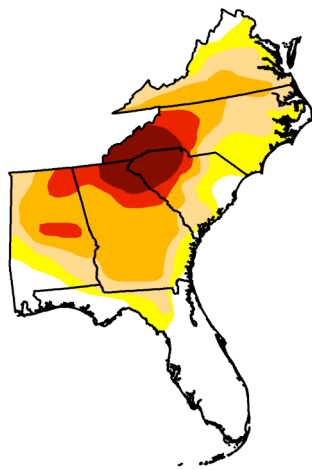


Radar estimated rainfall totals from the 14 day period including Fay's impacts (*Courtesy NOAA NWS*).

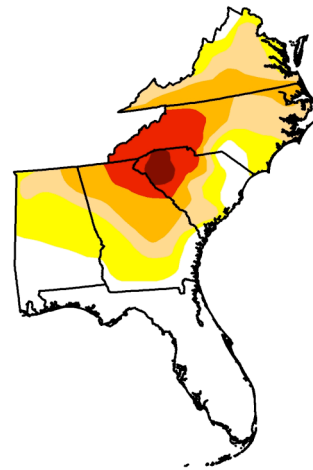
In Alabama, the rain came in slow-moving bands rather than torrential downpours, so much of the rain was able to soak into soils rather than running off as floodwaters. The storm brought 4 to 10 inches over the southern half of the state, with lesser amounts to the drought-stricken northern portion. While not enough rain fell in this area to completely alleviate the effects of long-term dryness, Fay was the first tropical rain system to impact the state since 2005 and brings tangible relief to dry soils and surface and groundwater levels.

Georgia is much the same as Alabama, with rainfall totals generally declining the further north you go in the State. An unofficial report in Thomasville, GA put the storm total at 27 inches. Other southern counties were in the 10-15 inch range. Groundwater levels should improve in central and southern Georgia.

The latest *U.S. Drought Monitor* now depicts Florida and southwest Alabama as free of drought. Northern Alabama has improved substantially in the last week from "moderate" or "extreme" drought to mostly "abnormally dry". Northern Georgia is not showing such a dramatic change, but has generally improved by at least one category.



August 19, 2008



August 26, 2008

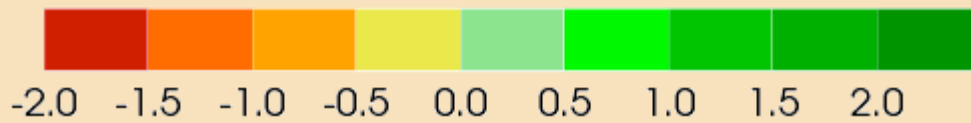
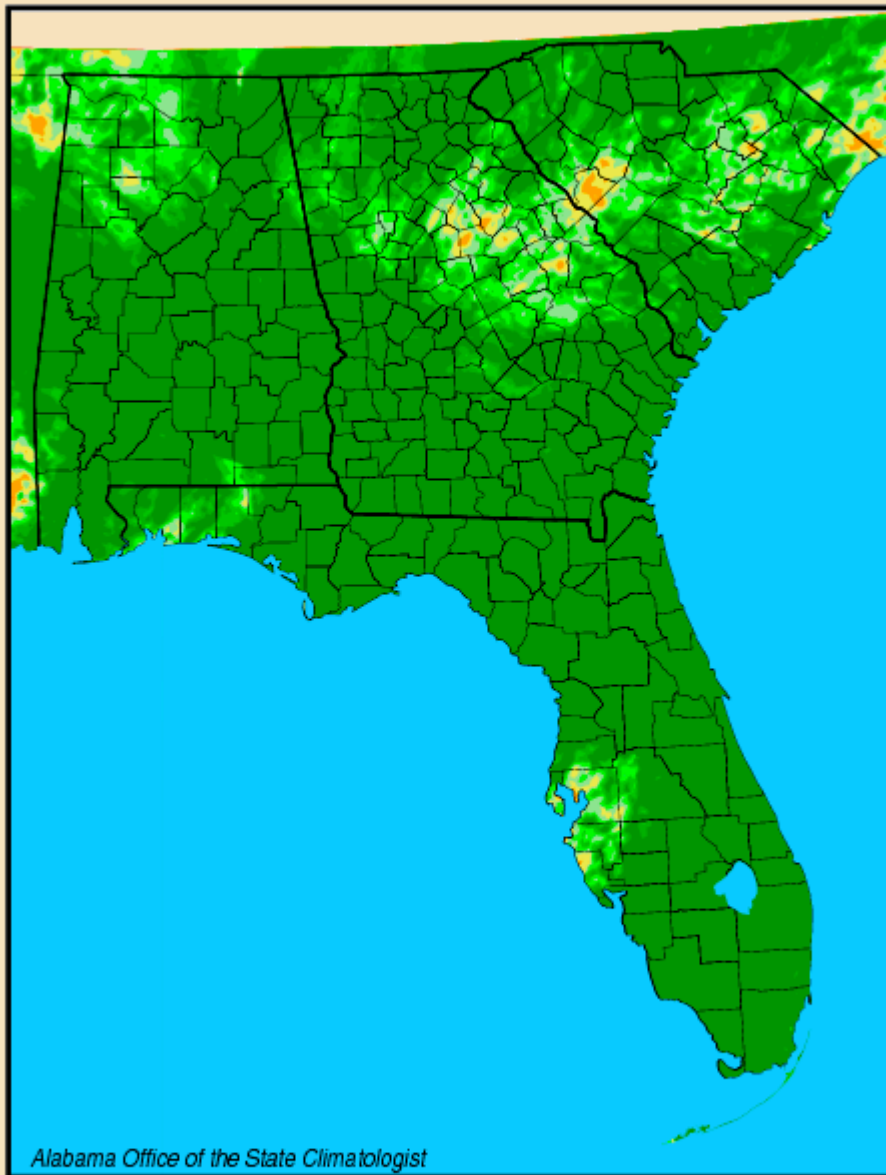
Intensity:

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

One week change in the *U.S. Drought Monitor*.

In the upper layers of the soil the Alabama State Climate Office's *Lawn and Garden Index* indicates near saturation over a vast majority of the three states.

Lawn-and-Garden Moisture Index for August 28, 2008



For more detailed information on tropical storm Fay's rainfall totals and storm impact, we have provided links to storm summaries and public information statement from area National Weather Service Forecast Offices

- [Melbourne NWS Storm Summary](#)
- [Tallahassee NWS Storm Summary](#)
- [Tampa NWS Storm Summary](#)
- [Mobile NWS Storm Summary](#)
- [Birmingham NWS Storm Summary](#)

For more detailed information on recent weather, please see the resources below:

- [Florida Automated Weather Network](#)
- [Georgia Automated Environmental Monitoring Network](#)
- [Alabama Office of the State Climatologist](#)
- [Southeast Regional Climate Center](#)
- [NWS Radar-derived Precipitation Totals](#)

Climate Outlook

Normal rainfall should continue in Florida, Georgia and Alabama. Neutral conditions have returned to the tropical Pacific Ocean, ending the La Niña that affected our climate in the winter and spring. Summer climate in the Southeast is characterized by hot, humid conditions and convective thundershowers. Coverage and frequency of these afternoon thunderstorms is higher in Florida and extreme South Georgia, but more "hit and miss" in the remainder of Georgia and Alabama.

Over much of inland Alabama and Georgia, this is the time when evapotranspiration begins to exceed normal rainfall, thus ending most meaningful recharge of surface and groundwater until the following winter. Thanks to tropical storm Fay, the widespread rainfall should help the area bridge this season where soils and water resources typically dry out. Although a bit excessive in the southern portions of the two states, the rainfall

was generally beneficial and will help crops carry through the remainder of the growing season.

Over Florida, the summer rainy season should continue as usual. In general, the second half of the season is a little less robust in south Florida, but more rainfall hits north Florida and the Panhandle. Also, expect Gulf coastal areas to receive more frequent thunderstorms, as Gulf water temperatures are now warm enough to support nocturnal convection.

The tropical season greatly affects rainfall amounts and coverage during late summer and fall in the Southeast. One or several strikes by tropical systems, whether a hurricane or just a weak storm or depression, can bring beneficial rainfall that is a normal component of the climate.

Neutral conditions have returned to the Pacific Ocean

[More information on El Niño/La Niña](#)

After a winter and spring with central and eastern Pacific Ocean temperatures along the equator colder than normal, a condition known as La Niña, the Pacific has now returned to near normal. Near normal sea surface temperatures in this area of the Pacific is known as Neutral conditions. Historically, neutral conditions occur roughly half the time. At other times, this area of the Pacific can swing into periods where it is much warmer than normal, known as El Niño, or much colder than normal, referred to as La Niña. As stated above, the Pacific Ocean was in a fairly strong La Niña last winter and spring.

Neutral conditions are likely to continue through the remainder of 2008 and possibly into 2009. In the past month, however, the far eastern portion of the tropical Pacific has continued to warm and is actually a little warmer than normal. While this warming is nowhere near enough to be considered El Niño at the present time, it does virtually rule out a return to La Niña.

[Click here for our El Niño Discussion.](#)

Hurricane Season

This year's hurricane season is shaping up to be a very active one. August, September and October are considered the peak months of the Atlantic hurricane season. Two tropical storms, Gustav and Hanna, have lined up behind tropical storm Fay. Forecasters at the National Hurricane Center predict Gustav could be a Category 3 hurricane before making landfall. NOAA recently updated its forecasting 14-18 named storms, 7-10 of which become hurricanes and 3-6 of those major hurricanes (category 3 or higher). The year-to-year variability in tropical activity in the Atlantic is partially controlled by the El Niño-Southern Oscillation. It is well-known that a developing El Niño decreases the number of tropical systems that form in the Atlantic basin by creating an environment prone to unfavorable vertical shear. This decrease in tropical activity corresponds to less frequent hurricane landfalls along all portions of the U.S. coast. La Niña (colder than normal water in the eastern tropical Pacific) increases the formation of tropical storms and hurricanes. Neutral conditions, like we are in this year, are most commonly associated with near normal hurricane activity.