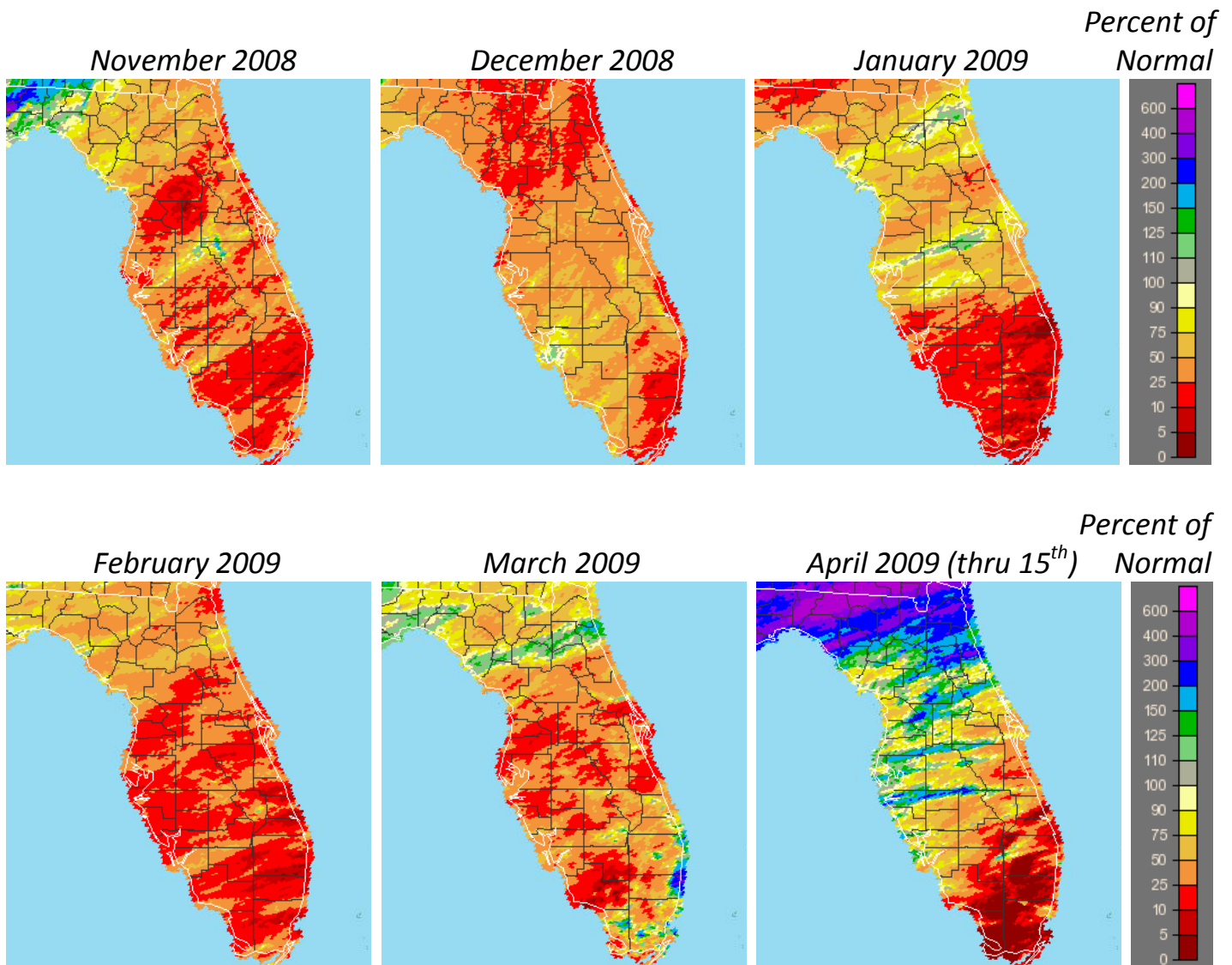


Overall Drought Continues Across West Central and Southwest Florida

Even after some beneficial rainfall April 13th and 14th (write-up available at the following link <http://www.srh.noaa.gov/images/tbw/pdf/TopNews/Apr14RainfallTotals.pdf>), our typical "dry season" has continued to be even drier than normal across West Central and Southwest Florida. We have had numerous cold fronts move across the area, but most of these did not produce much rainfall and left cool dry conditions in their wake. This can be seen in the monthly percent of normal rainfall graphics below where large portions of the region have seen less than 50 percent of normal rainfall each of the last five months. This trend has continued into the first half of April across much of the area, but some spots have been lucky and gotten some much needed rainfall.



This overall dry weather can be verified by looking at the total rainfall at some locations across the area for the time period of November 2008 through March 2009, as indicated in Table 1. These dry conditions have placed most spots in the top ten driest for this time period, as shown in Table 2. Also, in Table 3 is a comparison of the rainfall amounts that occurred during the last two November to March timeframes.

Table 1: The table below list the November 2008 through March 2009 total rainfall in inches, the normal for this time period and the percent of normal (based on 1971-2000 normals) at some sites across the region.

Observing Site	County	Rainfall		
		Total Nov 08 to Mar 09	Normal Rainfall Total	Percent of Normal
Chiefland 5 SE	Levy	10.50	18.49	57%
Bushnell 2 E	Sumter	3.63	15.08	24%
Brooksville Chin Hill	Hernando	4.65	15.57	30%
St. Leo	Pasco	5.32	16.02	33%
Tarpon Springs Swg Plt	Pinellas	4.19	15.51	27%
St Pete/Albert Whitted	Pinellas	5.25	13.56	39%
Tampa Intl	Hillsborough	5.95	11.70	51%
Hillsborough Rvr St Pk	Hillsborough	6.36	15.88	40%
Plant City	Hillsborough	6.01	13.84	43%
Lakeland Linder	Polk	7.09	12.82	55%
Mountain Lake	Polk	4.66	12.26	38%
Winter Haven	Polk	5.89	12.98	45%
Bradenton 5 ESE	Manatee	5.51	13.76	40%
Parrish	Manatee	6.11	13.50	45%
Fort Green 12 WSW	Manatee	6.42	12.72	50%
Sarasota-Bradenton Intl	Manatee	5.27	13.76	38%
Wauchula 2 N	Hardee	5.45	12.25	45%
Myakka River St Pk	Sarasota	5.28	14.11	37%
Venice	Sarasota	4.65	12.62	37%
Arcadia	Desoto	3.85	11.50	33%
Avon Park 2 W	Highlands	4.51	12.05	37%
Desoto City 8 SW	Highlands	4.33	11.90	36%
Archbold Bio Stn	Highlands	3.55	11.97	30%
Punta Gorda 4 ESE	Charlotte	3.41	10.91	31%
Fort Myers/Page Field	Lee	3.38	10.36	33%

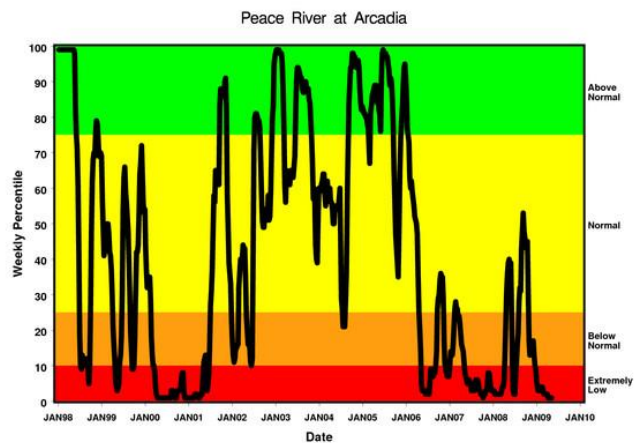
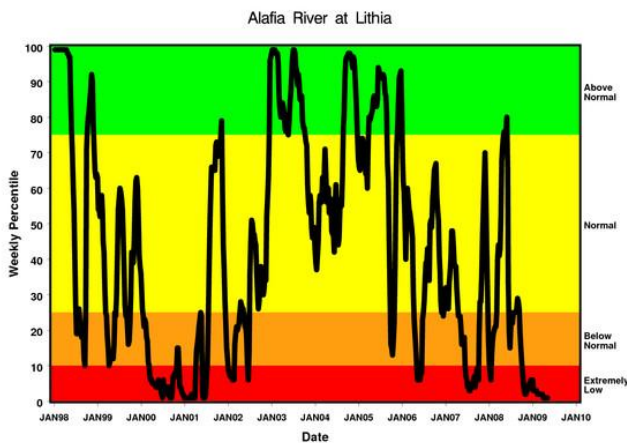
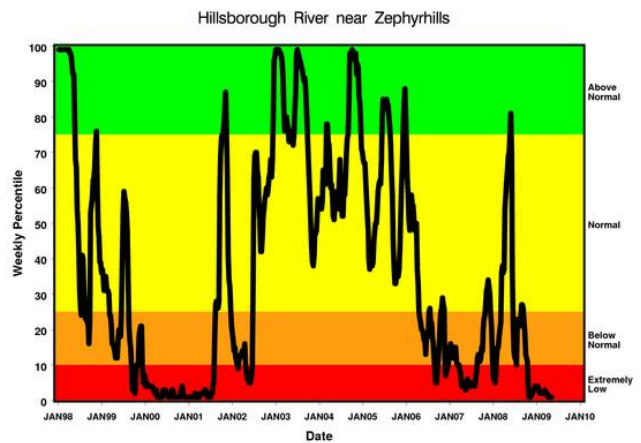
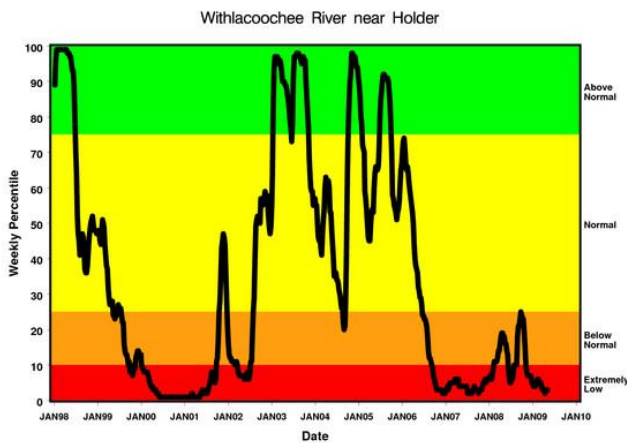
Table 2: The table below list the current November to March total rainfall in inches and what rank this is, as well as the driest November to March and what year it occurred.

Observing Site	Rainfall		Driest/ Ending Year	Year Records Began
	Total Nov 08 to Mar 09	Rank		
Chiefland 5 SE	10.50	7th	8.47/2002	1956
Bushnell 2 E	3.63	1st	3.63/2009	1948
Brooksville Chin Hill	4.65	2nd	4.57/1945	1892
St. Leo	5.32	3rd	2.26/1907	1895
Tarpon Springs Swg Plt	4.19	4th	3.27/1907	1892
St Pete/Albert Whitted	5.25	7th	2.57/1939	1914
Tampa Intl	5.95	17th	1.97/1907	1890
Hillsborough Rvr St Pk	6.36	5th	4.07/1949	1943
Plant City	6.01	9th	1.43/1907	1892
Lakeland Linder	7.09	14th	3.90/1935	1915
Mountain Lake	4.66	4th	3.78/1976	1935
Winter Haven	5.89	1st	5.89/2009	1941
Bradenton 5 ESE	5.51	2nd	1.77/1976	1965
Parrish	6.11	4th	2.31/1976	1957
Fort Green 12 WSW	6.42	8th	4.04/1976	1948
Sarasota-Bradenton Intl	5.27	4th	2.22/1976	1948
Wauchula 2 N	5.45	10th	2.98/1976	1933
Myakka River St Pk	5.28	7th	2.62/1945	1943
Venice	4.65	4th	3.38/1949	1955
Arcadia	3.85	8th	2.50/1949	1899
Avon Park 2 W	4.51	9th	1.13/1907	1901
Desoto City 8 SW	4.33	2nd	2.03/1950	1947
Archbold Bio Stn	3.55	1st	3.55/2009	1969
Punta Gorda 4 ESE	3.41	3rd	2.62/1974	1965
Fort Myers/Page Field	3.38	12th	1.29/1949	1902

Table 3: The table below compares the November 2007 through March 2008 and November 2008 through March 2009 total rainfall in inches, and list the normal rainfall amount for this time period (based on 1971-2000 normals) at some sites across the region.

Observing Site	County	Rainfall	Rainfall	Normal Rain Total
		Total Nov 07 to Mar 08	Total Nov 08 to Mar 09	
Chiefland 5 SE	Levy	17.04	10.50	18.49
Bushnell 2 E	Sumter	10.38	3.63	15.08
Brooksville Chin Hill	Hernando	13.94	4.65	15.57
St. Leo	Pasco	13.04	5.32	16.02
Tarpon Springs Swg Plt	Pinellas	13.83	4.19	15.51
St Pete/Albert Whitted	Pinellas	14.67	5.25	13.56
Tampa Intl	Hillsborough	11.90	5.95	11.70
Hillsborough Rvr St Pk	Hillsborough	11.86	6.36	15.88
Plant City	Hillsborough	9.48	6.01	13.84
Lakeland Linder	Polk	11.70	7.09	12.82
Mountain Lake	Polk	8.44	4.66	12.26
Winter Haven	Polk	11.11	5.89	12.98
Bradenton 5 ESE	Manatee	8.09	5.51	13.76
Parrish	Manatee	8.81	6.11	13.50
Fort Green 12 WSW	Manatee	10.07	6.42	12.72
Sarasota-Bradenton Intl	Manatee	7.04	5.27	13.76
Wauchula 2 N	Hardee	7.85	5.45	12.25
Myakka River St Pk	Sarasota	8.71	5.28	14.11
Venice	Sarasota	9.50	4.65	12.62
Arcadia	Desoto	8.16	3.85	11.50
Avon Park 2 W	Highlands	6.16	4.51	12.05
Desoto City 8 SW	Highlands	7.52	4.33	11.90
Archbold Bio Stn	Highlands	8.15	3.55	11.97
Punta Gorda 4 ESE	Charlotte	6.84	3.41	10.91
Fort Myers/Page Field	Lee	7.82	3.38	10.36

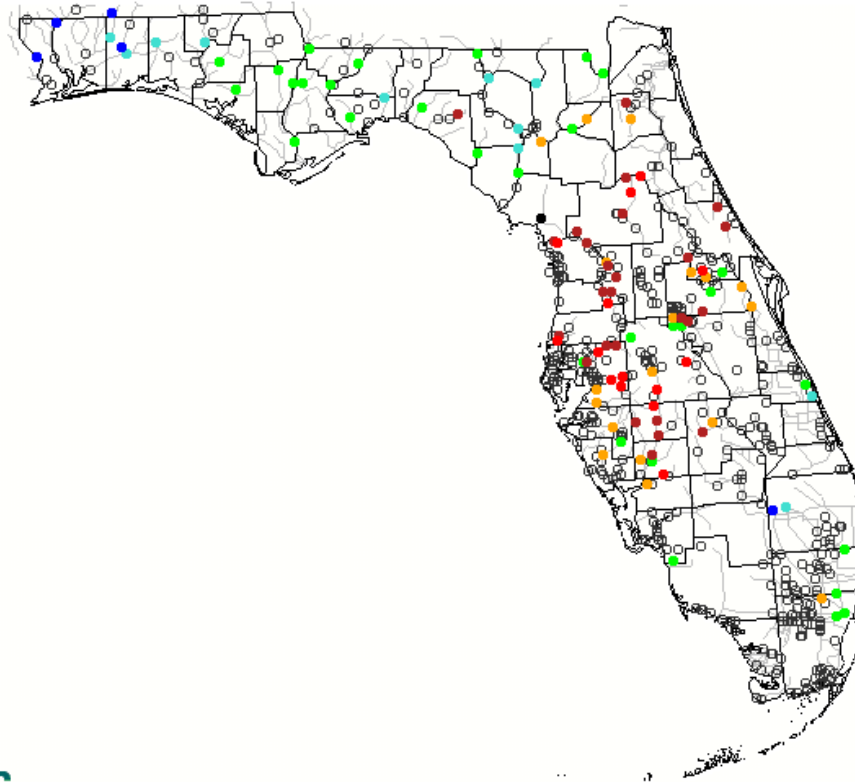
So how bad is it really? Let's take a look at the flow of a few of the rivers across the region. River flows naturally fluctuate seasonally over West Central and Southwest Florida, with the highest flows normally seen during and immediately after the rainy season (June-September), and the lowest flows at the end of the dry season (October-May). To gage the health of the river, it's important to compare the flows to the historic averages for that time of year. The plots below show how actual river fluctuations over time compare to normal flows based on historic averages. Therefore, it can be seen in the images below, that the rivers are flowing extremely low and near the levels seen back in 2000 and 2001 (images courtesy of SWFWMD).



For details about some of the lake levels across the region, check the latest "Structure Operations Hydrographs" issued by Southwest Florida Management District (SWFWMD) at the following link:

<http://www.swfwmd.state.fl.us/waterres/hydrographs/hydrographs.pdf>

The United States Geological Survey (USGS) also has a map of streamflow compared to historical streamflow for the day of the year at sites across the region. In other words the color of the dots represents conditions relative to those that have historically occurred at this time of year. Therefore, we can see in the map below that streamflow on many of the rivers across the area is in the lowest 10 percent, or much below normal.



Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

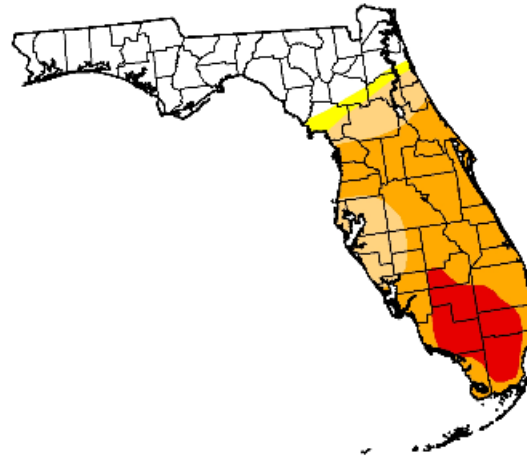
The river flows, lake levels, and lack of rain are just a few of the multiple indices and impacts that go into producing the U.S. Drought Monitor. This product is updated each week and represents a consensus of federal and academic scientists. Therefore, looking at the latest U.S. Drought Monitor, pictured below, we can see that most of the region is in what is classified as a *Moderate to Severe Drought*. For details about what this means see the table below the graphic.

U.S. Drought Monitor

Florida

May 5, 2009
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	37.6	62.4	59.8	47.3	11.3	0.0
Last Week (04/28/2009 map)	37.6	62.4	59.8	47.3	8.9	0.0
3 Months Ago (02/10/2009 map)	16.0	84.0	24.6	0.0	0.0	0.0
Start of Calendar Year (01/06/2009 map)	44.0	56.0	13.4	0.0	0.0	0.0
Start of Water Year (10/07/2008 map)	75.8	24.2	0.0	0.0	0.0	0.0
One Year Ago (05/06/2008 map)	64.4	35.6	18.8	5.7	0.0	0.0



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



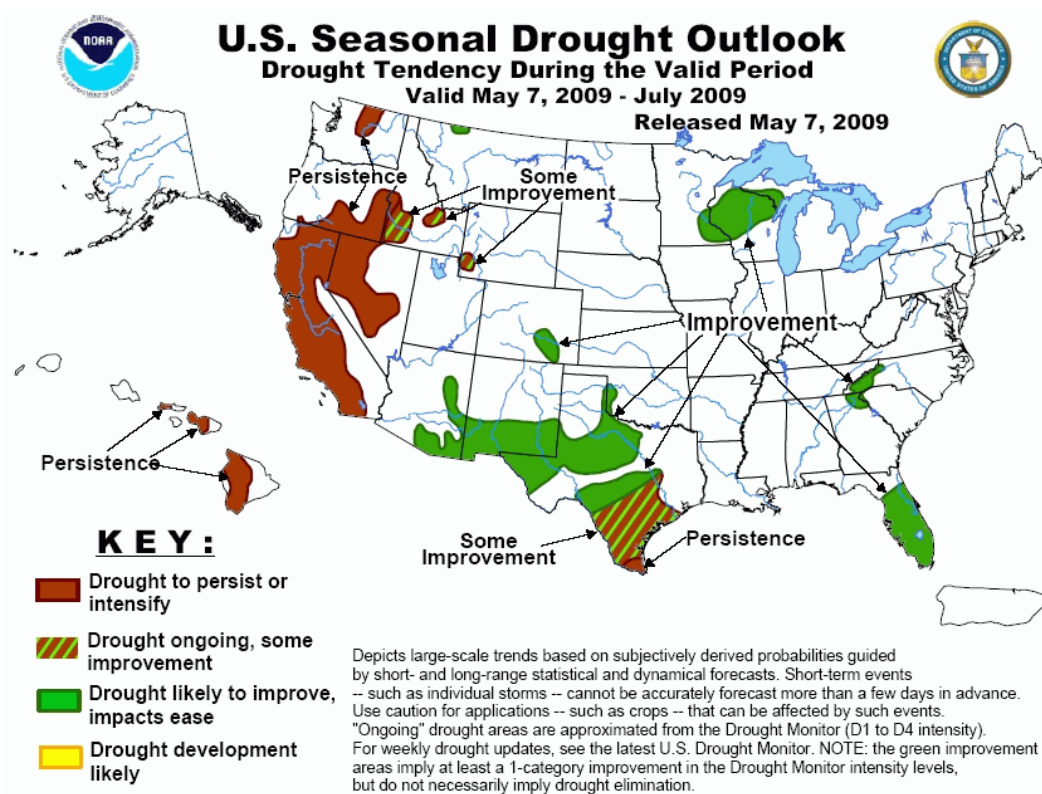
Released Thursday, May 7, 2009

Author: Laura Edwards, Western Regional Climate Center

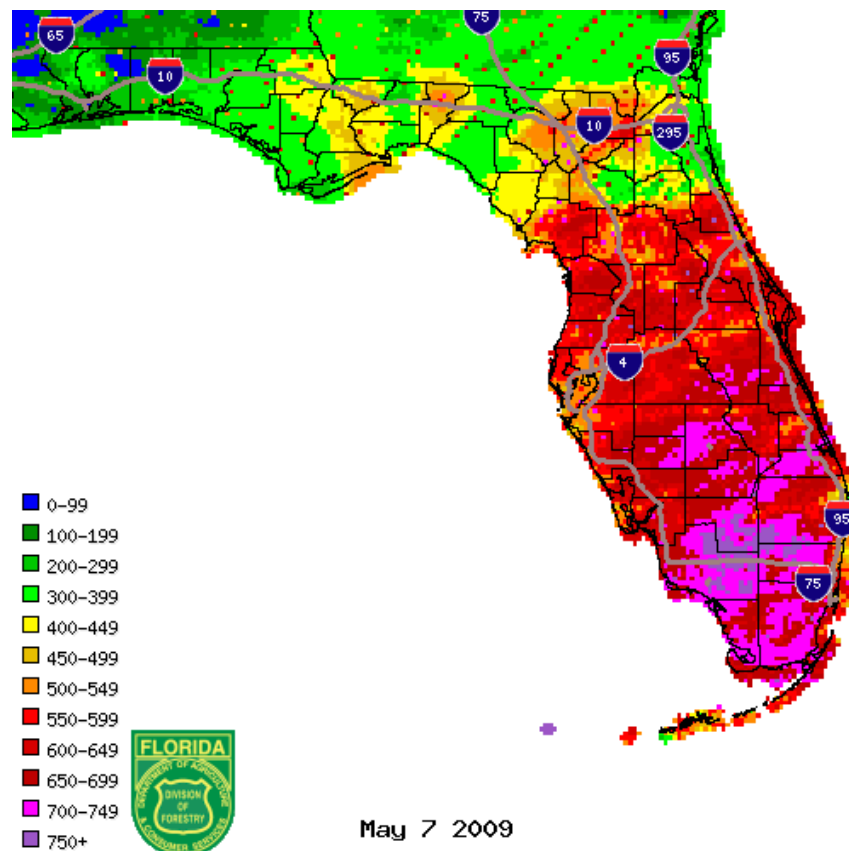
<http://drought.unl.edu/dm>

Drought Severity Classification		
Category	Description	Possible Impacts
D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures; fire risk above average. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered.
D1	Moderate Drought	Some damage to crops, pastures; fire risk high; streams, reservoirs, or wells low, some water shortages developing or imminent, voluntary water use restrictions requested
D2	Severe Drought	Crop or pasture losses likely; fire risk very high; water shortages common; water restrictions imposed
D3	Extreme Drought	Major crop/pasture losses; extreme fire danger; widespread water shortages or restrictions
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; exceptional fire risk; shortages of water in reservoirs, streams, and wells, creating water emergencies

So the question remains “*What is the prospect of seeing rain in the future?* “. Well unfortunately we are in the midst of what is usually one of the driest times of the year as the storm track shifts further north keeping most of the widespread beneficial rainfall to our north and the humidity has not yet increased enough to allow numerous diurnal showers and thunderstorms to develop. This leaves us with frequent fair warm days having temperatures in the 80s to lower 90s, along with rather dry air with relative humidity values falling to or below 35 percent. However, the summer thunderstorm season does usually begin by mid-June and due to this expectation the U.S. Seasonal Drought Outlook which runs through July 2009, pictured below, indicates improvement in the drought conditions.



The present conditions combined with the freezes this past winter and the lack of rainfall over the last five months has set the stage for an active fire weather season. This season usually begins in April and continues until the summer thunderstorm season begins in late May or early June. This is further supported by the Keetch-Byram Drought Index (KBDI) which gives an indication of the dryness of the soil and surface fuels. It uses a scale that ranges from 0 (no moisture deficit) to 800. High values of the KBDI are an indication that conditions may be favorable for the occurrence and spread of wildfires. As seen below in the image provided by the Florida Division of Forestry, the KBDI values over much of West Central and Southwest Florida remain above 500.



For more climate information visit our web site at the following address:
<http://www.weather.gov/tampabay> and then click on the “Local” link in the climate section on the left side of the page.

Other sites:

Drought Monitor:

<http://drought.unl.edu/dm/index.html>

Seasonal Drought Outlook:

http://www.cpc.ncep.noaa.gov/products/expert_assessment/seasonal_drought.html

Southwest Florida Water Management District:

<http://www.swfwmd.state.fl.us/drought/>

USGS WaterWatch:

<http://water.usgs.gov/waterwatch/?m=real&r=fl&w=map>

Keetch-Byram Drought Index (KBDI):

http://flame.fl-dof.com/fire_weather/KBDI/index.html