



2016-17 La Nina Potentially a Dry Spring/Fire Season

**NWS WFO Jacksonville, Florida
Thursday, November 17, 2016
8:59 AM**



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US National Weather Service Jacksonville



La Nina to Neutral Conditions May Persist Into the Spring



Currently we have Below Normal Sea Surface Temperatures in the equatorial Pacific known as “La Nina” Conditions.

This impacts the local weather and the amount of rainfall we receive.

This La Nina has already caused drier conditions in many areas not impacted by the tropical storms this year.

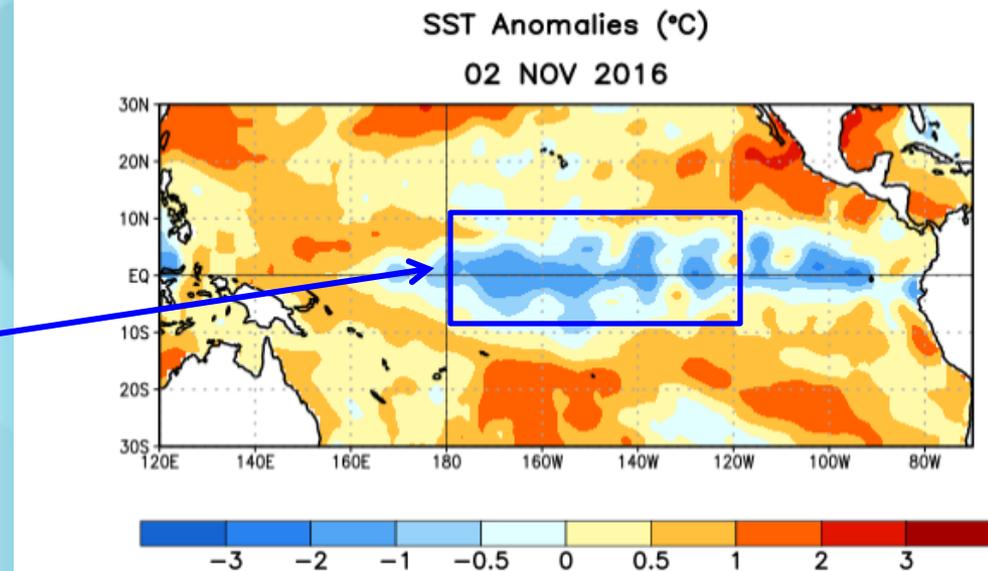


Figure 1. Average sea surface temperature (SST) anomalies (°C) for the week centered on 2 November 2016. Anomalies are computed with respect to the 1981-2010 base period weekly means.



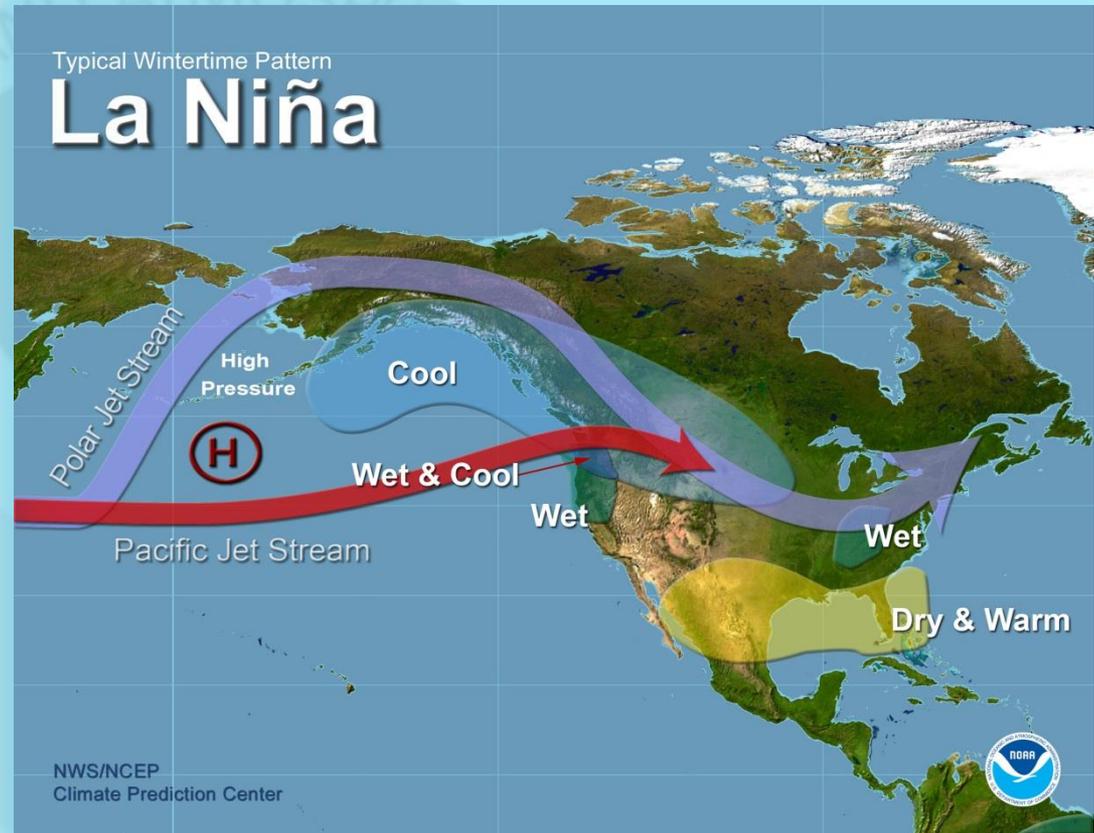


Normal La Nina Winter Time Type Pattern



La Nina pushes the Jet Stream well up north with warmer & drier than normal conditions for the southern states.

Generally, a lower severe weather risk but a higher chance of fire conditions, especially if we start out dry.



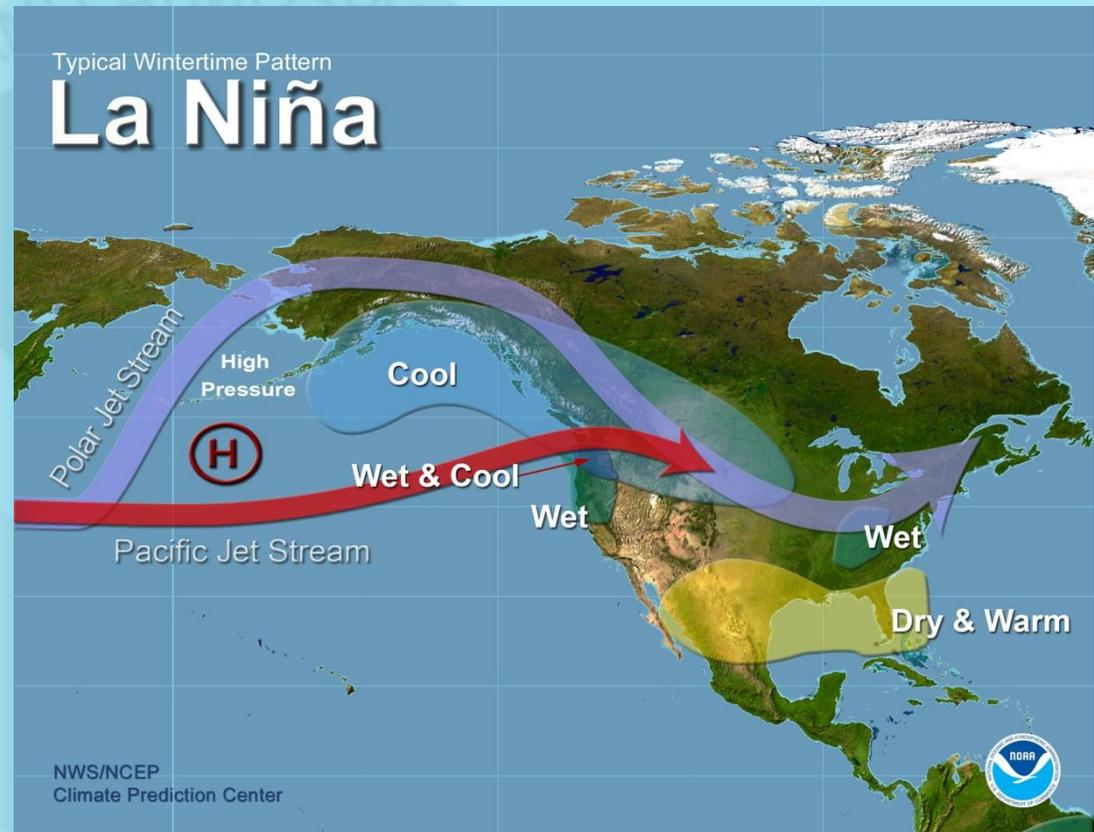


Normal La Nina Winter Time Type Pattern



La Nina Impacts

1. Lower number of Killing Freezes
2. Less frequent rainfall but still enough to permit lighter fuel growth
3. Rapid forest fuel drying likely as we approach the spring dry season
4. Lower stream and river levels
5. Well water levels may also drop



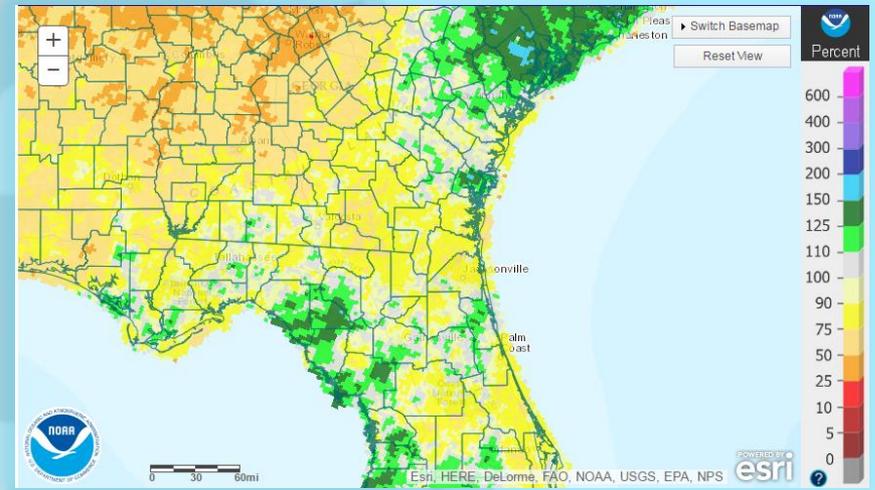
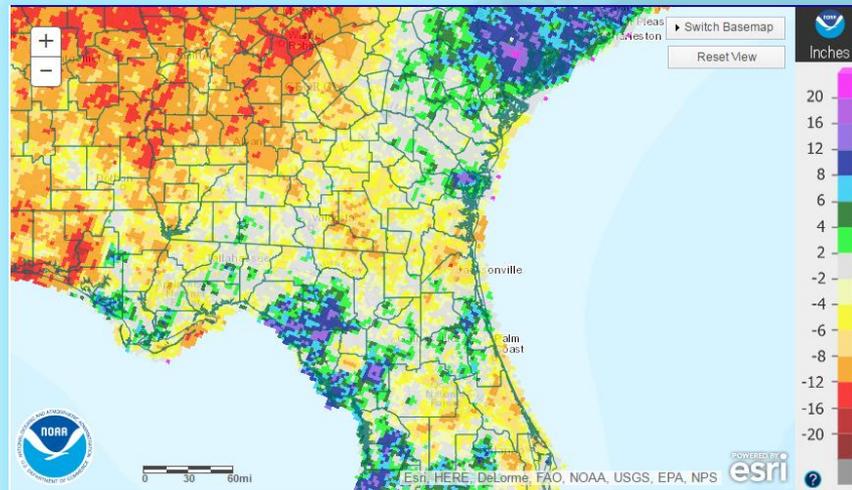


Last 180 Days Rainfall (Past Six Months)



**Departure from Normal
Precipitation in inches**

**Percentage of Normal
Precipitation**



Note: Despite our tropical activity the majority of the northern Florida and southern Georgia areas are experiencing below normal precipitation.

**Also bear in mind even in the “wet” areas that rainfall fell in several short events .
Therefore much of that above normal rainfall became runoff.**

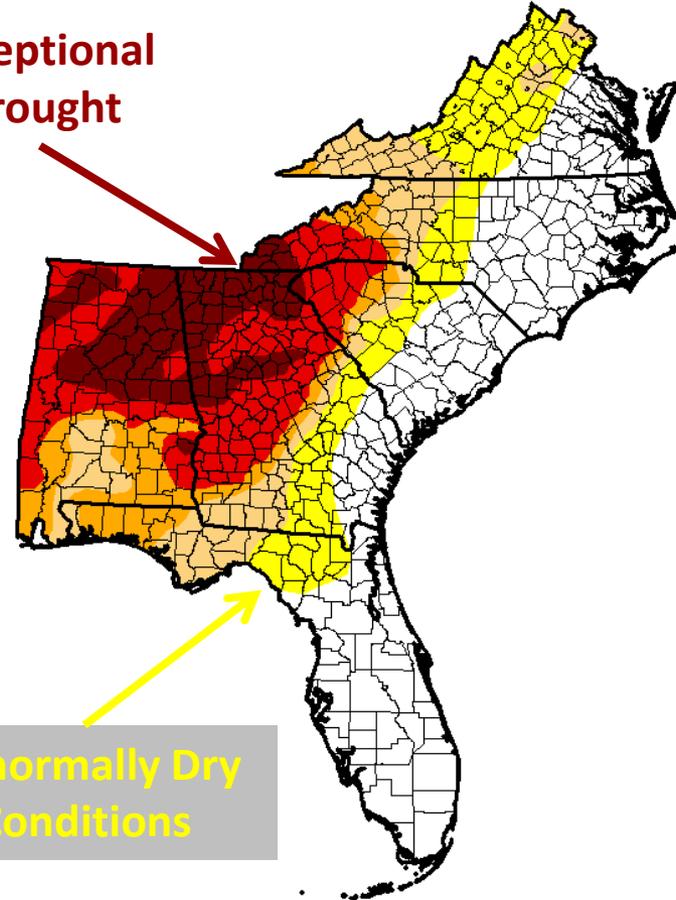


Current Drought Index



Currently, we are a long way from the Exceptional Drought conditions they are experiencing in north Georgia and the lower Appalachians (that generally takes a year or so to build to), **but the local trends are toward drier conditions.**

Exceptional Drought



Abnormally Dry Conditions





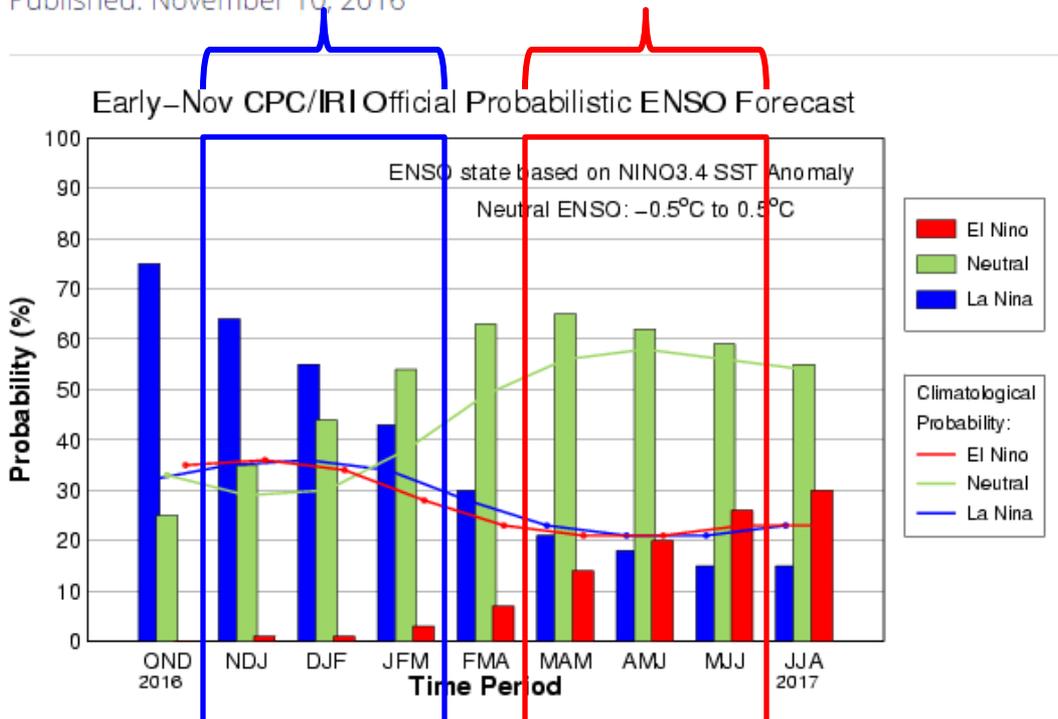
La Nina Forecast May Persist into the Spring



Note: “Dry” **La Nina** conditions are favored over the Winter “wet/recharge” Season (Dec., Jan., & Feb) and **Neutral conditions** are favored during the Spring Dry Period (March, April, & May).

The Spring “**Neutral Conditions**” can really go either way. We could be dry, ***BUT*** we also could realize early season low/tropical activity in the Gulf of Mexico. There is just no way to know.

CPC/IRI Official Probabilistic ENSO Forecast
Winter Wet Season Spring Dry Season
Published: November 10, 2016



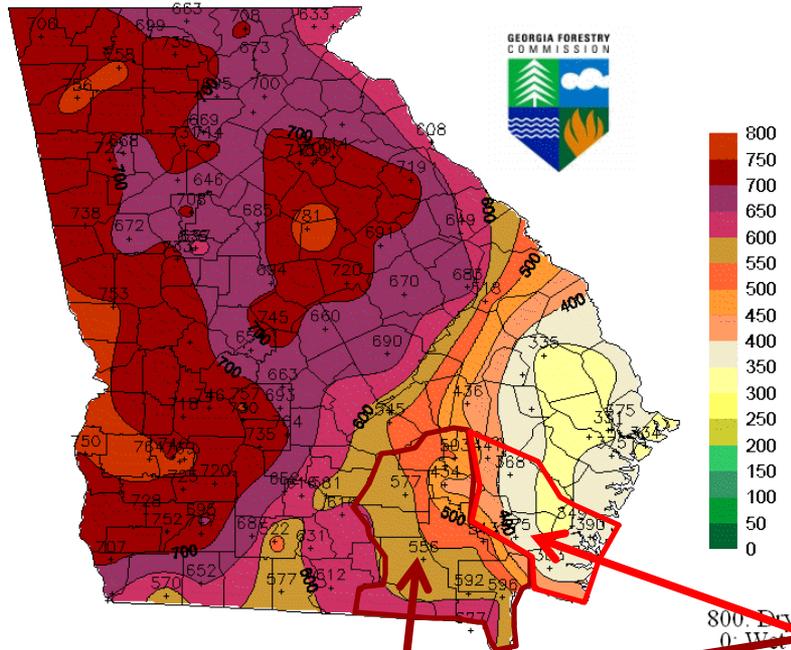


Current Keetch Byram Drought Index (KBDI) for Georgia



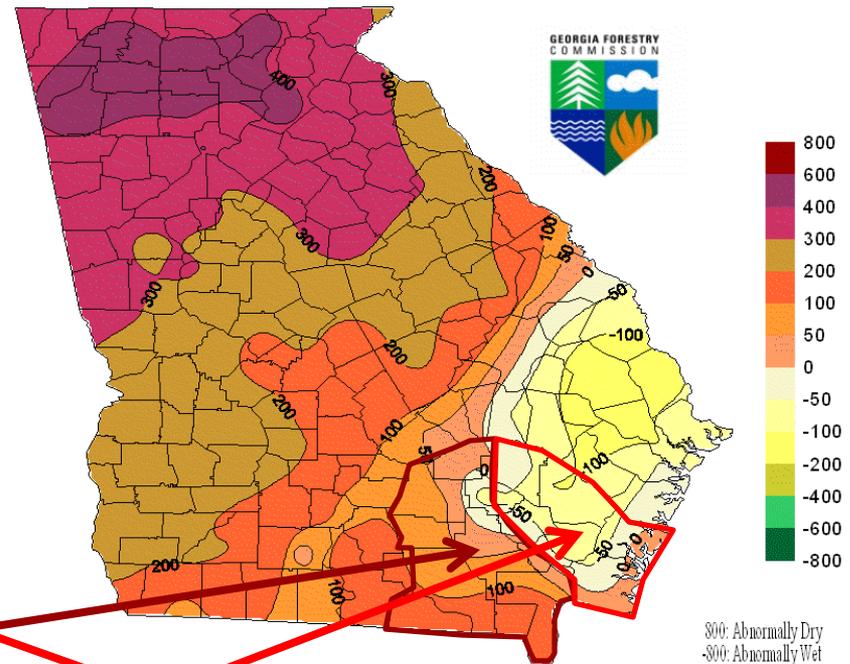
The KBDI is a short term measure of drought, it is good for estimating how short term fuels are drying out. Really reacts in weeks to a few months.

Map of KBDI at November 16, 2016 1300 EST



Georgia Automated Environmental Monitoring Network provided 75% of the stations in the map.

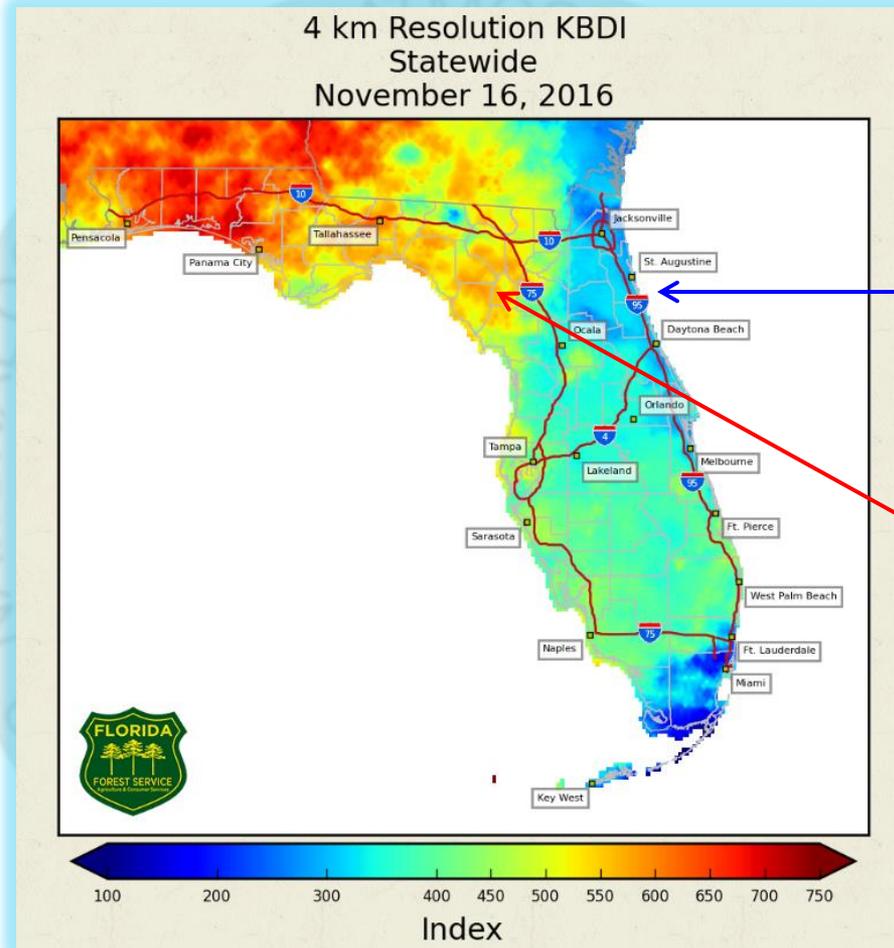
KBDI Deviation from Normal at November 16, 2016 1300 EST



Area drying out now, and area likely to dry out this winter.



Current KBDI in Florida



Tropical Rainfall from
Hermine, Julia, and
Matthew have the
coast a bit wetter...

...but the inland areas
have been drying out
for some time.

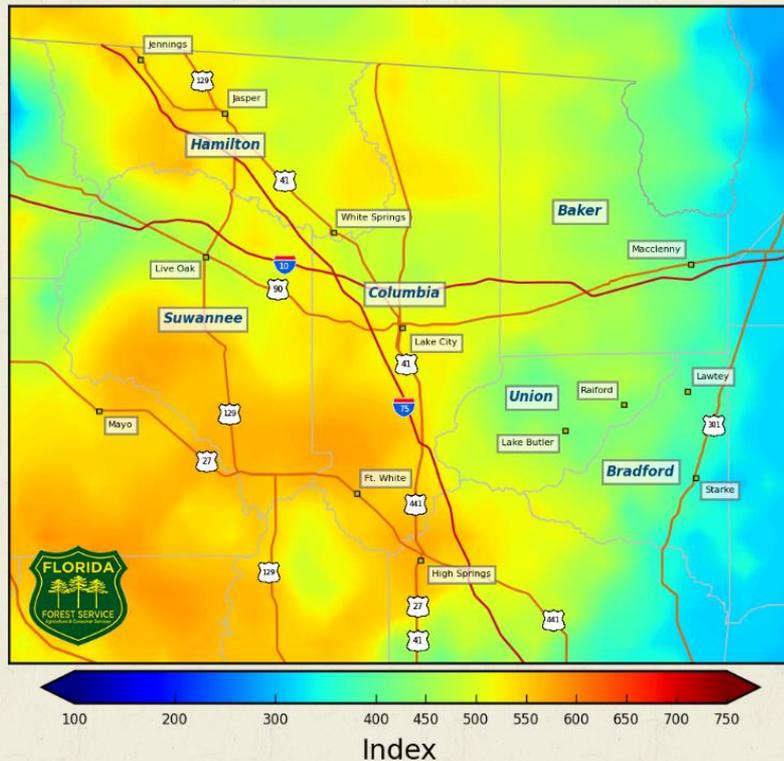




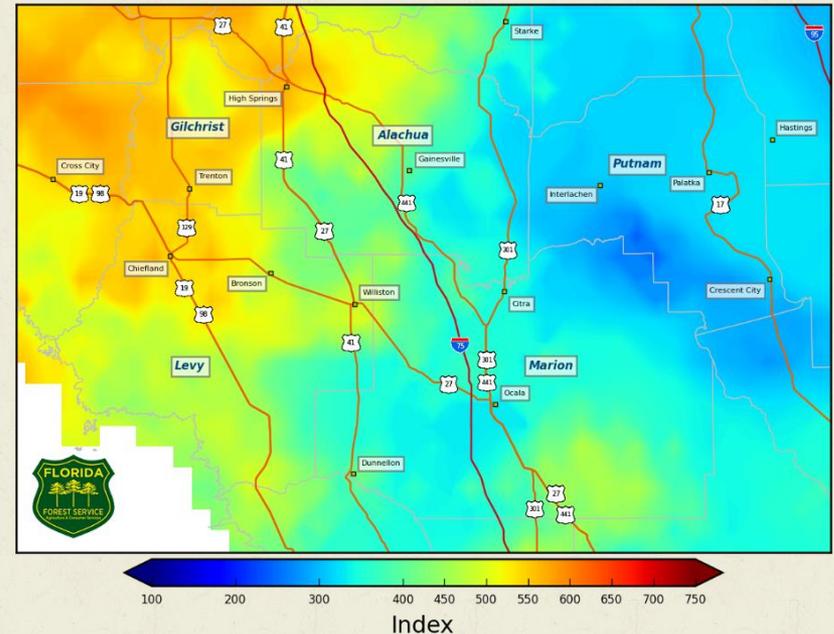
Current KBDI Values in the Suwannee Valley/Ocala Areas



4 km Resolution KBDI
Suwannee Forestry Center
November 16, 2016



4 km Resolution KBDI
Waccasassa Forestry Center
November 16, 2016



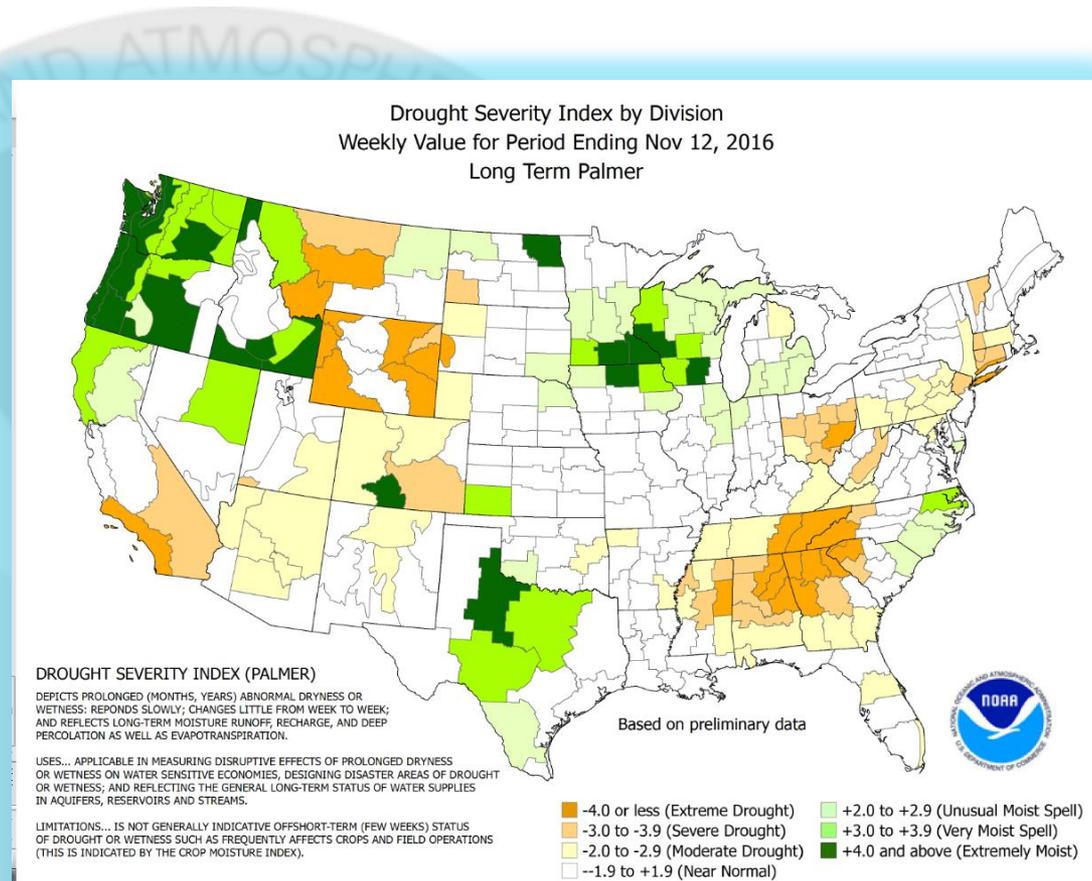


Palmer Long Term Drought Severity Index



Unlike the KBDI, which again is a short term measure, the Palmer Drought Severity Index reacts over several months. This gives us an idea of what is happening with agriculture, stream flows and longer term fuels.

Bottom line, is even here conditions are drying out across south Georgia and north Florida.



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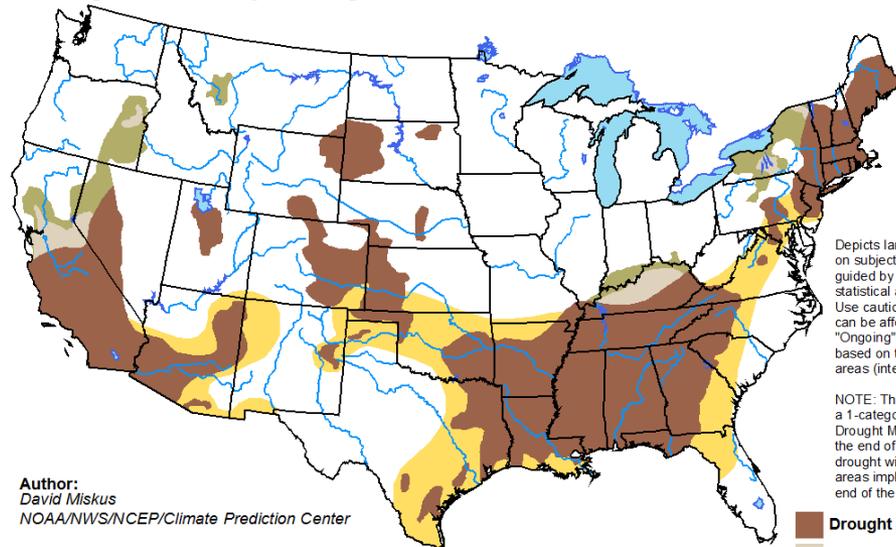
So what is the Outlook for the Winter?



Drought Development is likely for our area this Winter. Certainly not to the extent of north Georgia and the western Carolinas as that takes a year or so to build to those levels but still D0 to D1 Drought is possible.

Probably continued additional drying as we head into the normally "Dry (March, April, May) Season."

U.S. Seasonal Drought Outlook Valid for November 17 - February 28, 2017
Drought Tendency During the Valid Period
Released November 17, 2016

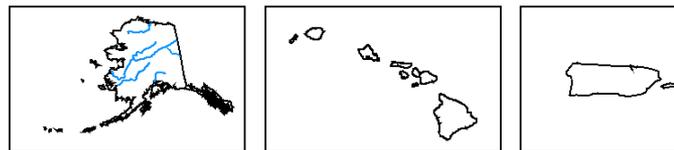


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NOAA/NWS/NCEP/Climate Prediction Center

Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely



<http://go.usa.gov/3eZ73>



La Nina Talking Points



1. We are looking at a pattern which favors fewer and lighter precipitation events this winter with less killing freezes.
2. Forest fuels are likely to remain drier than normal over the Winter and then rapidly dry out during the Spring.
3. Stream flows are likely to decrease over the winter and rapidly decrease during the Spring.
4. What happens for the May/June Fire Season will be highly dependent upon early season tropical activity, but *it would be prudent to plan for an active Spring fire season* (and really a more active winter as well).

