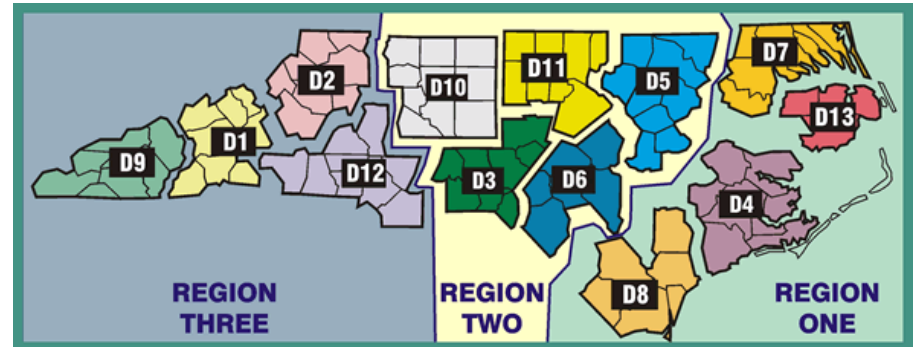


Statewide Seasonal Fire Danger Assessment

– August 2023 Update –



Created by: Jamie Dunbar

Fire Environment Staff Forester

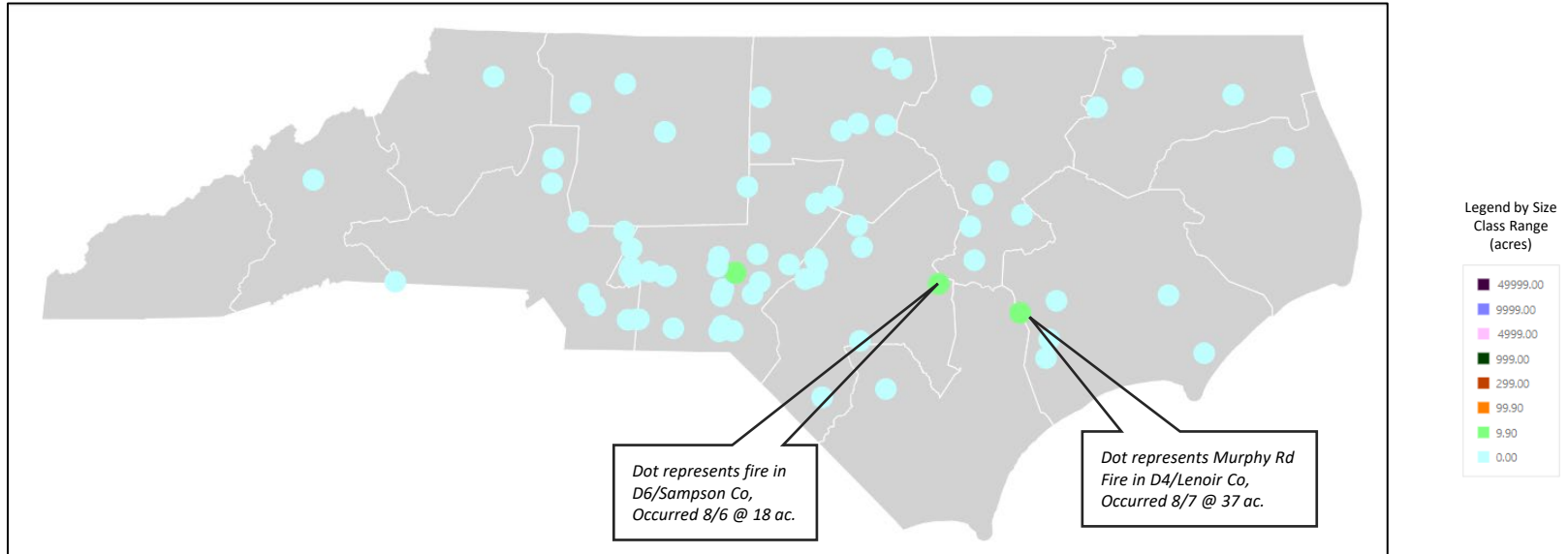
NC Forest Service

Month to Date Incident Activity

fiResponse Incident Location Map (for general context)

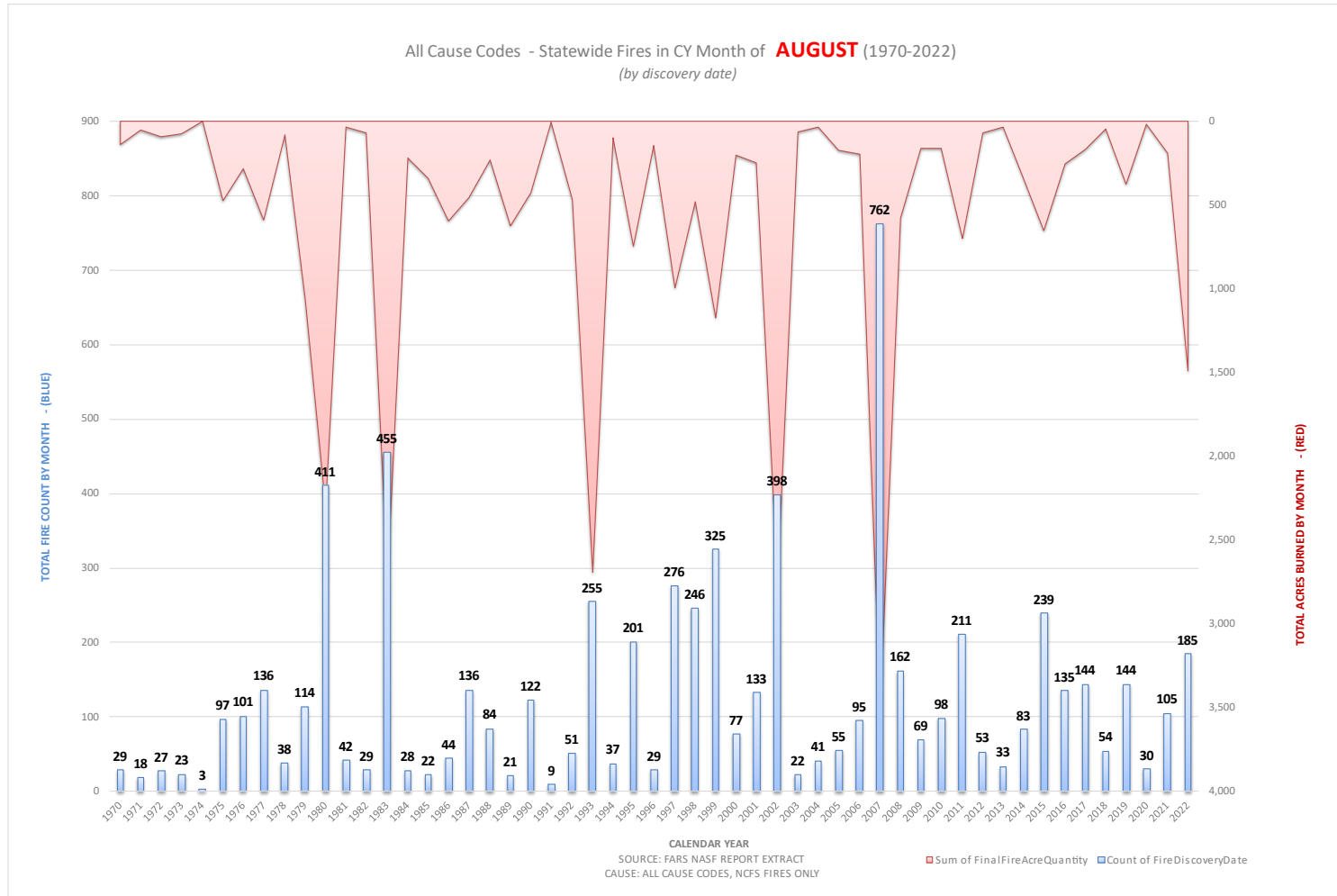
Date Range: 8/1 – 8/10, 2023

Report: Business Intelligence Module, Response Trends Map



NCFS – By Region				
Monthly <u>Fire</u> Activity (Does Not Include Federal Ownerships)				
Data Source:	Signal 14 Regional Activity Summary Report (Signal 14 is a snapshot in time)			
Date Range:	8/1 – 8/10, 2023			
Area	Wildfire Count	Wildfire Acres	RX Count (State & Private)	RX Acres (State & Private)
R1	9	17.3	5	728
R2	42	98.8	7	412
R3	5	3.3	0	0

Distribution of All Fires for month of AUGUST from 1970 - 2022



Cause: All Cause Codes, Statewide, NCF5 Reported Fires Only

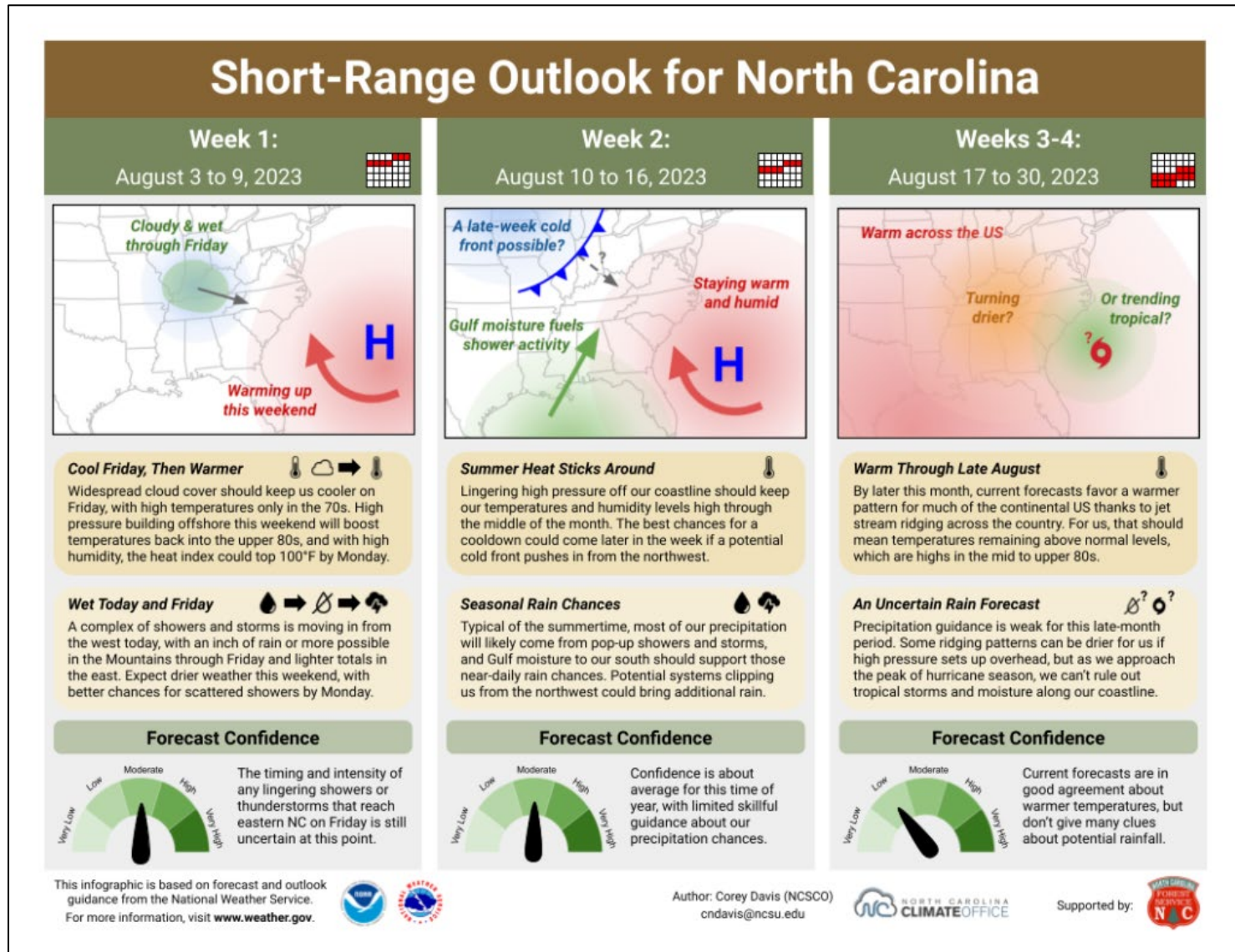
10-Yr. Rolling Average for August: ~ 115 Fires for 357 Acres

Fire Environment Slides

Summary at End

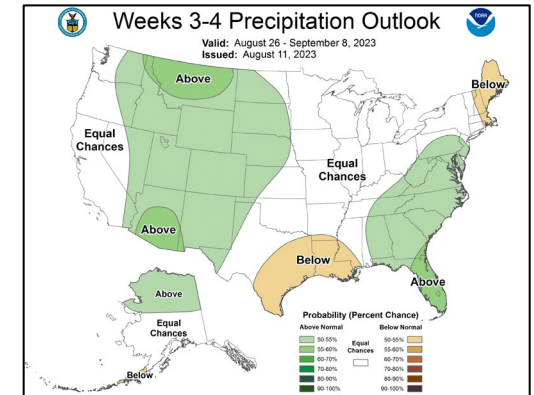
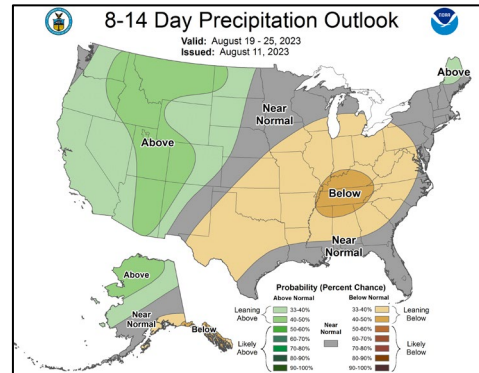
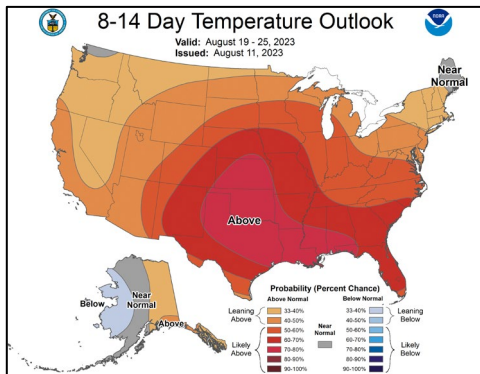
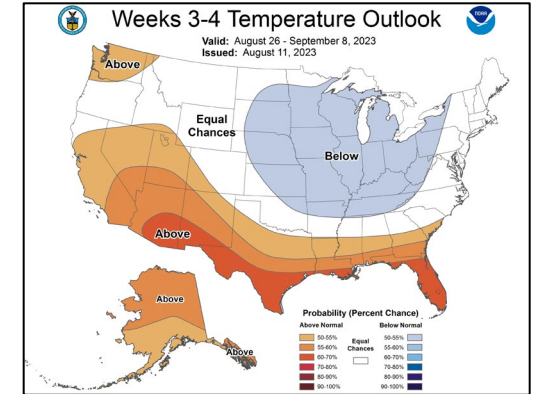
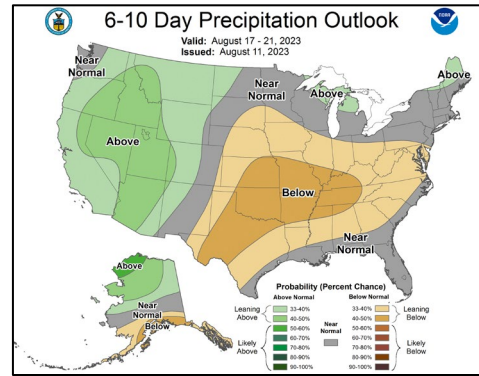
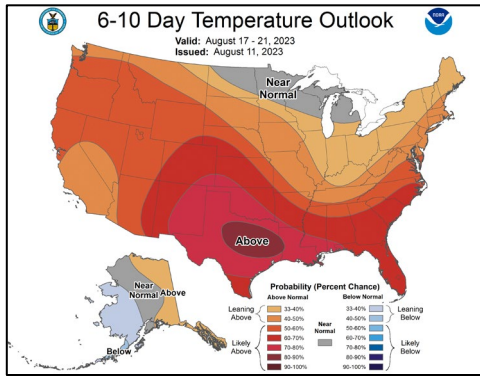
State Climate Office: Short-Range Monthly Outlook for NC

Released 8/3/23 & Location: <https://climate.ncsu.edu/fire/outlooks/>

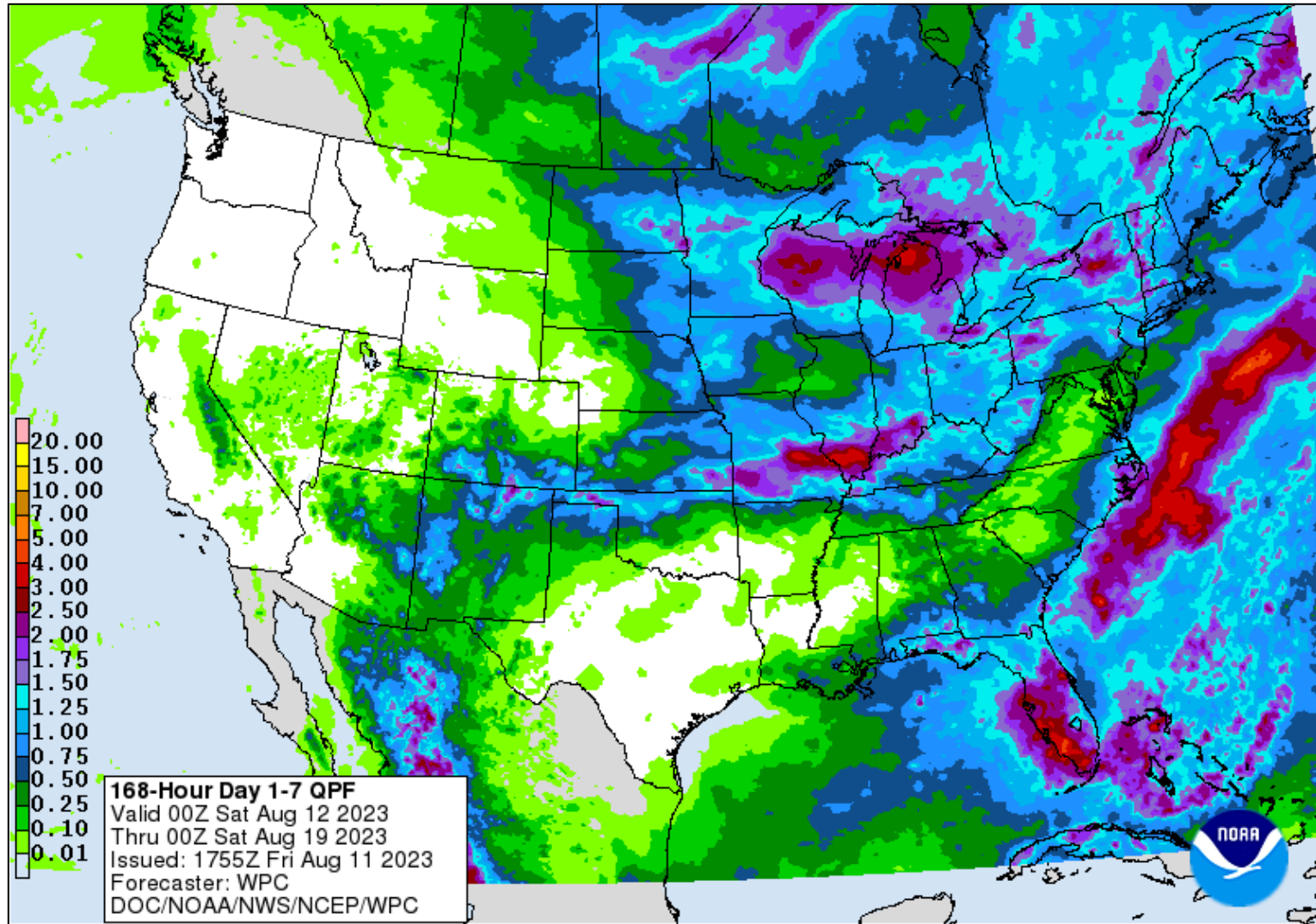


Temp & Precip Outlook

6-10 Day, 8-14 Day & Weeks 3-4

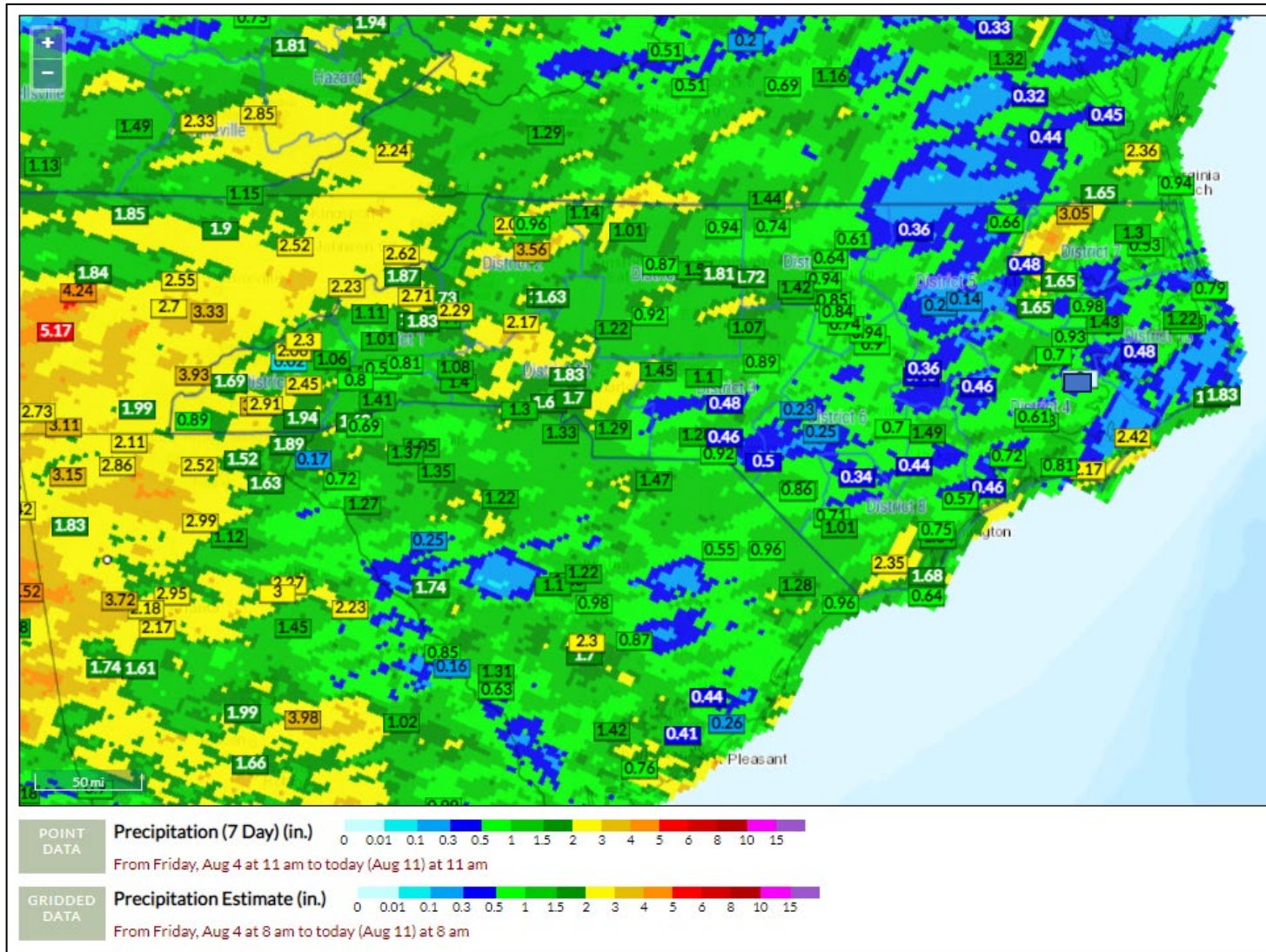


Quantitative Precipitation Forecast, 7-Day



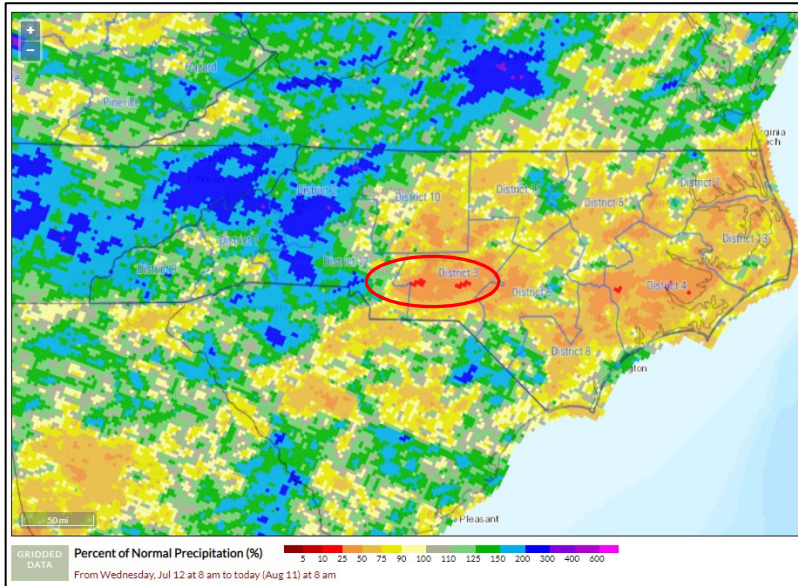
7 Day Precipitation Totals

FWIP (Point accumulation ending at 1100 on 8/11, Grid ending 0800 on 8/11)

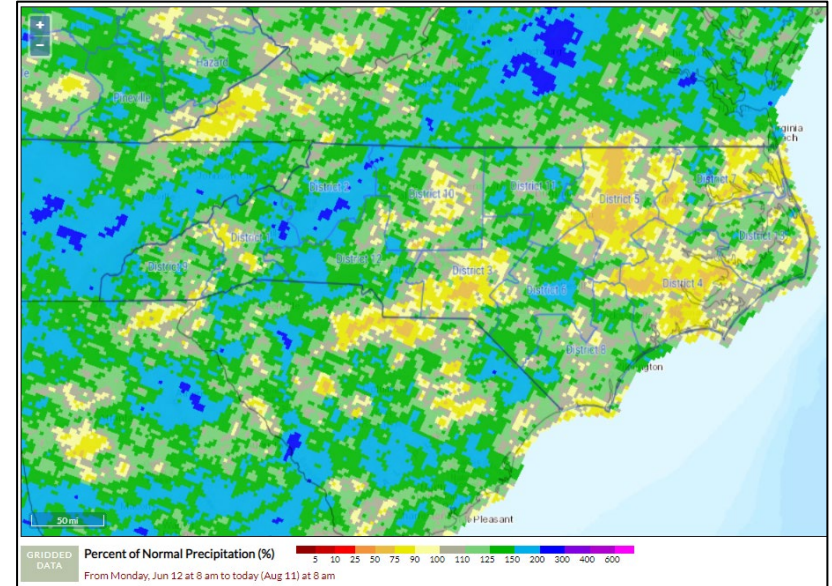


Percent of Normal Precip, FWIP (Ending 0800 8/11)

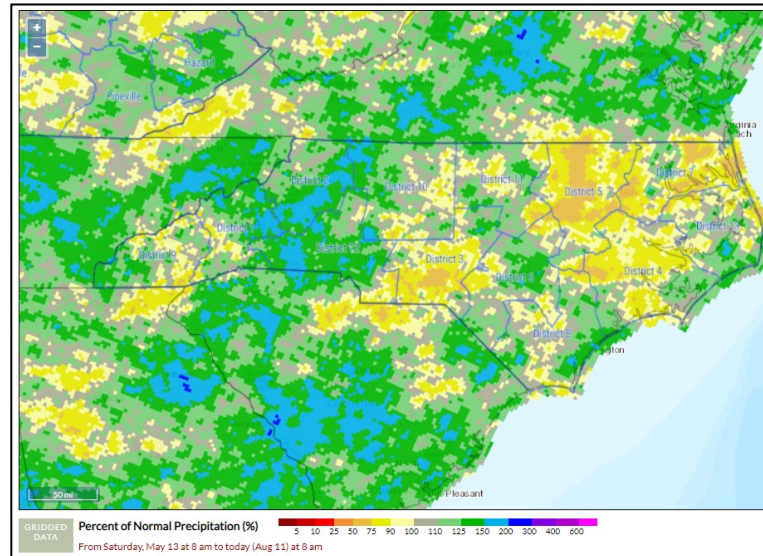
30-Day % of Normal



60-Day % of Normal



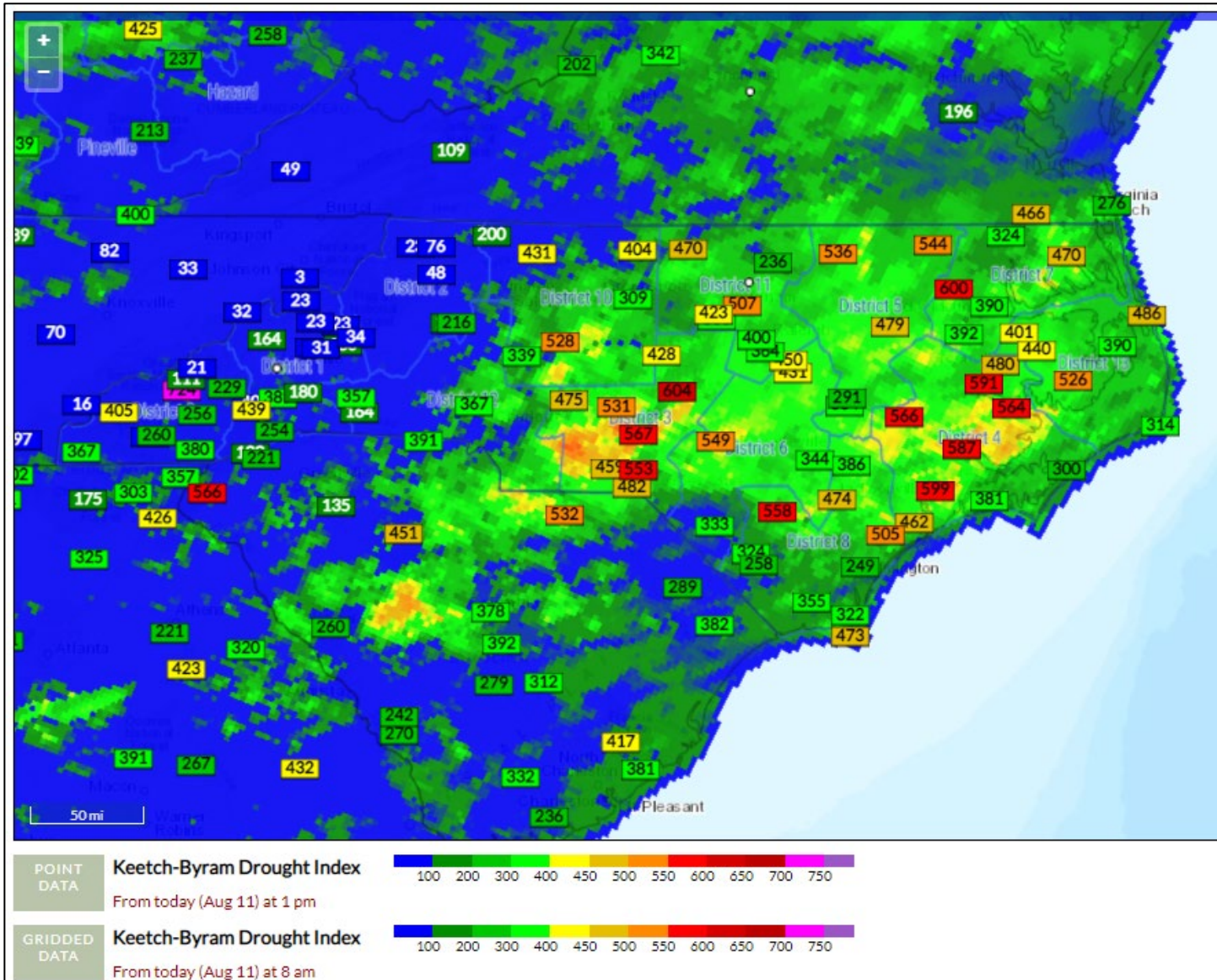
90-Day % of Normal



- Dry conditions developing at multiple time scales, mainly east of R3.
- Most pronounced at the 1-Month level. Example of red pixels in D3 Area circled estimated at ~25% of normal.
- Still \geq ~55-60% of Normal category at the 3-Month scale in the drier areas.
- Typical of hit & miss storm driven precip events.

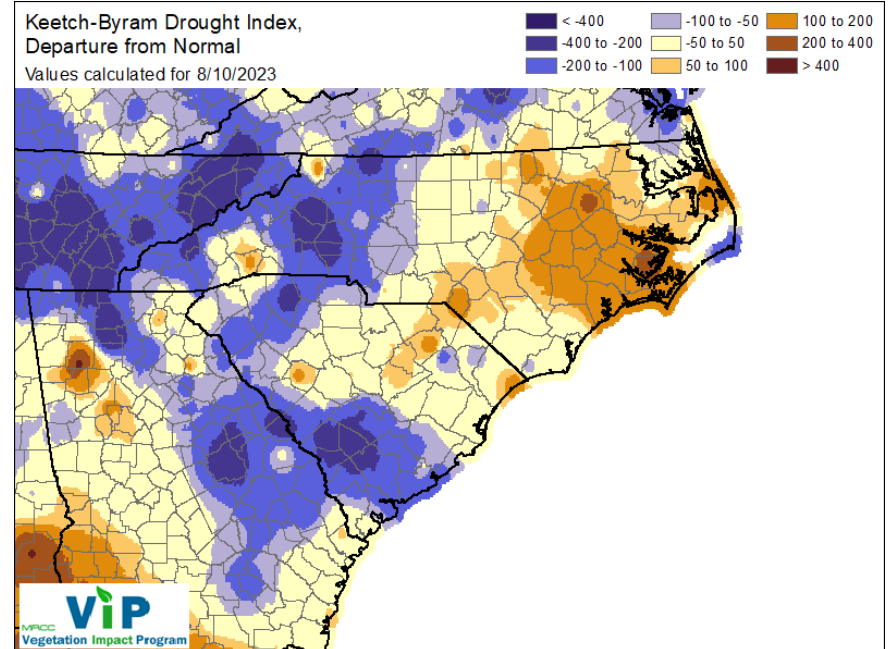
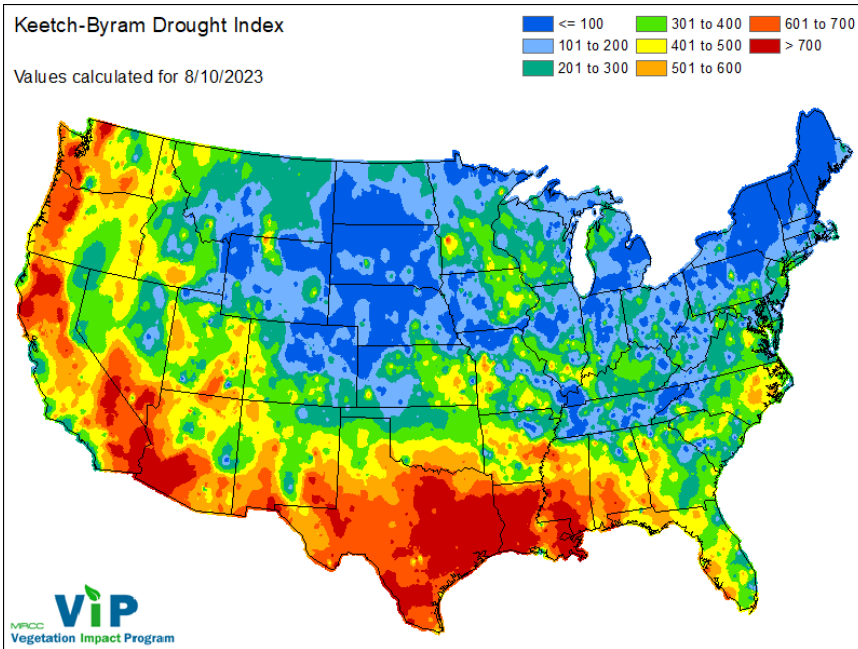
KBDI - Gridded & Station Points

FWIP (Point calculation from WIMS @ 1300 on 8/11, SCO created Grid ending 0800 **8/11/23**)



KBDI – Calculated Values & Estimated Departures from Normal

- *This product is created by the Midwestern Regional Climate Center. See [FAQ](#).*



North Carolina Drought Update

For the assessment period ending August 8, 2023

This Week's Drought Monitor of North Carolina Map

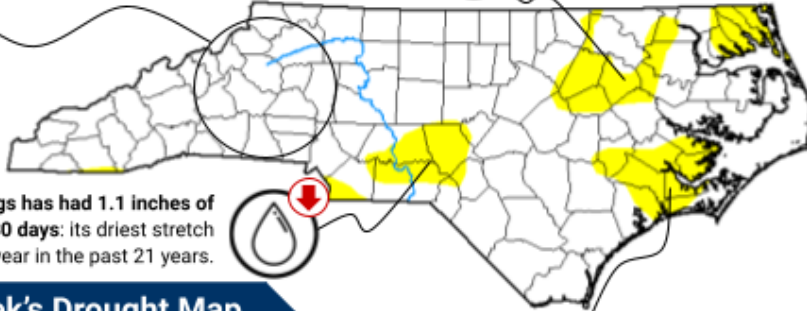
From the US Drought Monitor, authored by Brian Pugh (NOAA/NWS/NCEP/CPC) with input from the North Carolina Drought Management Advisory Council (ncdrought.org)



Up to 7 inches of rain in the Mountains last week **boosted inflows to reservoirs** in the Catawba and Yadkin river basins.



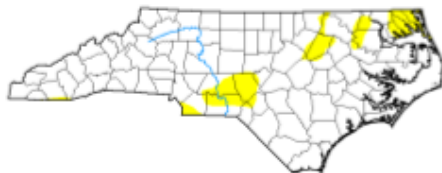
Low streamflows are now occurring along the Tar River, which is at its historical 6th percentile over the past week in Tarboro.



Jackson Springs has had 1.1 inches of rain in the past 30 days: its driest stretch at this time of year in the past 21 years.



Last Week's Drought Map



Cotton bolls in Craven County are dry and wilting. Statewide, cotton progress is behind the 5-year average according to USDA/NASS.

This infographic was created by



Statewide Condition Summary

What's Changed? Abnormally Dry (D0) conditions have continued to expand in eastern North Carolina, including in a new area of dryness across the central Coastal Plain.

What's New? Rainfall last week was fairly scattered, with some eastern areas seeing less than a quarter-inch total. Combined with the ongoing summer-like temperatures, environmental conditions continue to dry out, particularly in soils and vegetation. Without rain soon, those impacts could worsen with the onset of localized flash drought.

What's Next? Today's cold frontal passage could bring up to half an inch of rain, plus some strong storms. More rain is possible from the next front arriving on Monday.

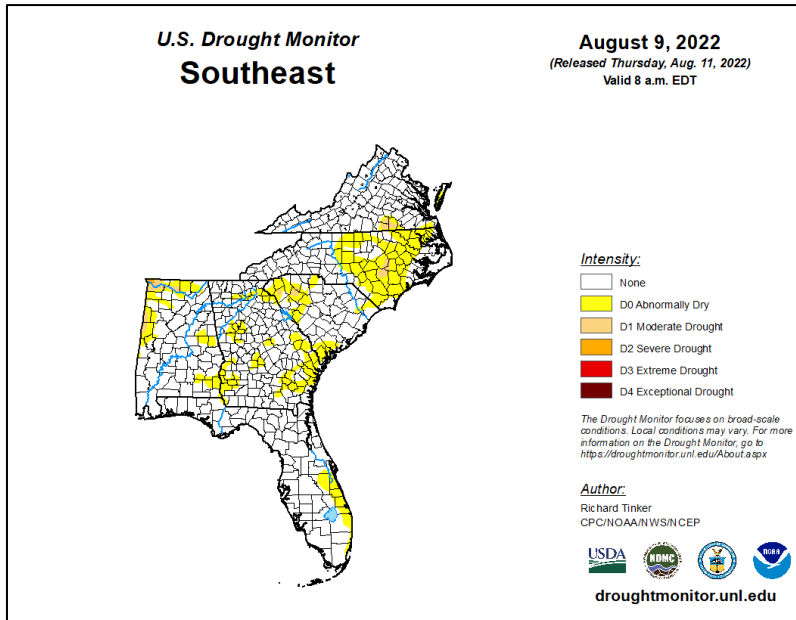
Statewide Coverage By Category

Category	Coverage This Week	Change Since Last Week
D0: Abnormally Dry	16.43%	+6.78%
D1: Moderate Drought	0.00%	0.00%
D2: Severe Drought	0.00%	0.00%
D3: Extreme Drought	0.00%	0.00%
D4: Exceptional Drought	0.00%	0.00%

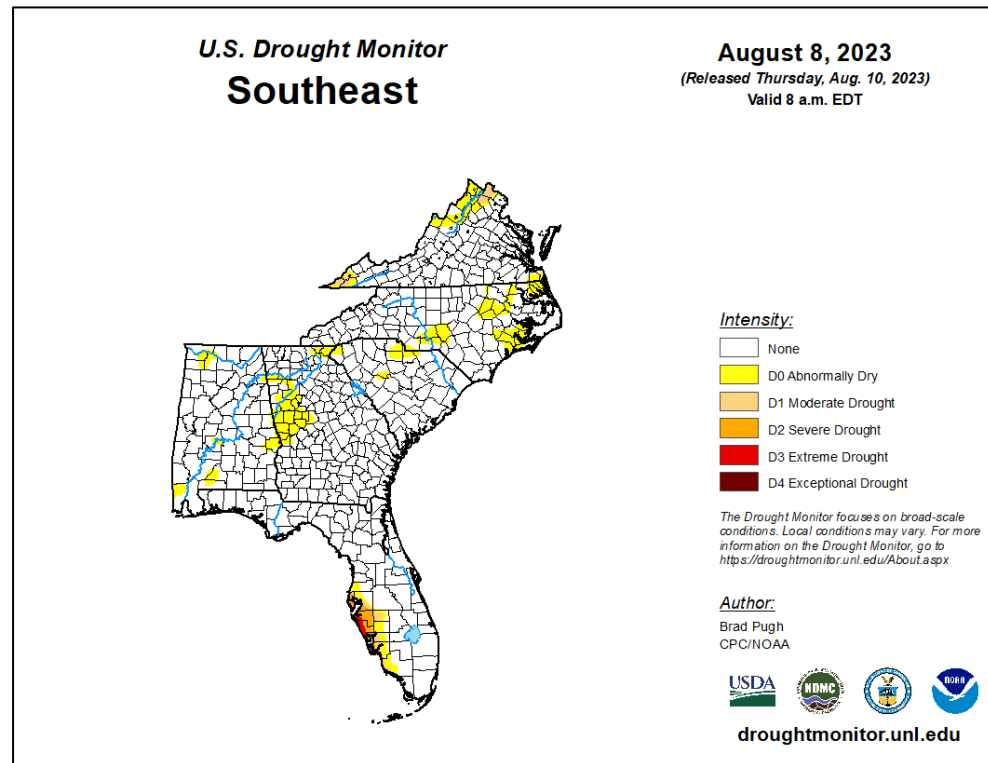
Drought Monitor (USDM)

- “D0” Abnormally Dry Designation now for ~16% of State
- The USDM map is released every Thursday morning, with data valid through Tuesday at 7am Eastern.

One Year Ago:



Current Week:

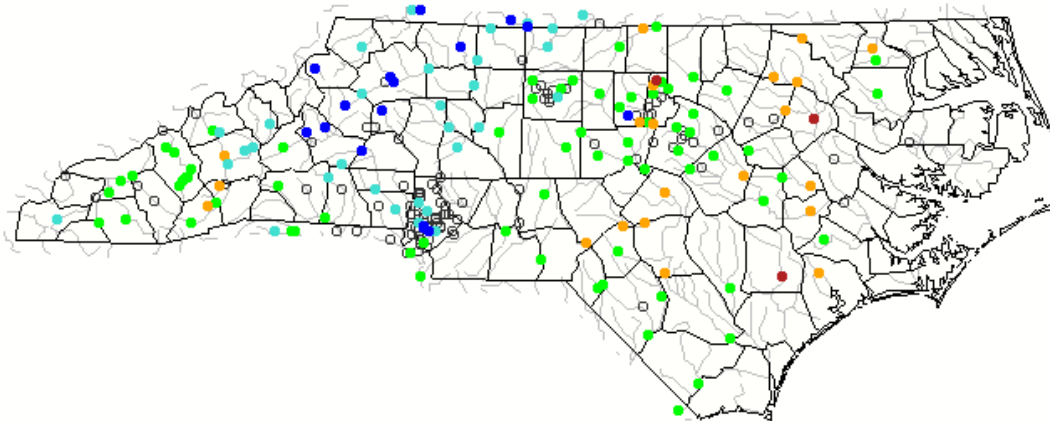


Streamflow:

Map of 7-day average streamflow compared to historical streamflow for the day of the year (North Carolina)

North Carolina ▼ or Water-Resources Regions ▼ All Days

Thursday, August 10, 2023



Search USGS streamgage 🔍

Choose a data retrieval option and select a location on the map

List of all stations Single station Nearest stations

Explanation - Percentile classes

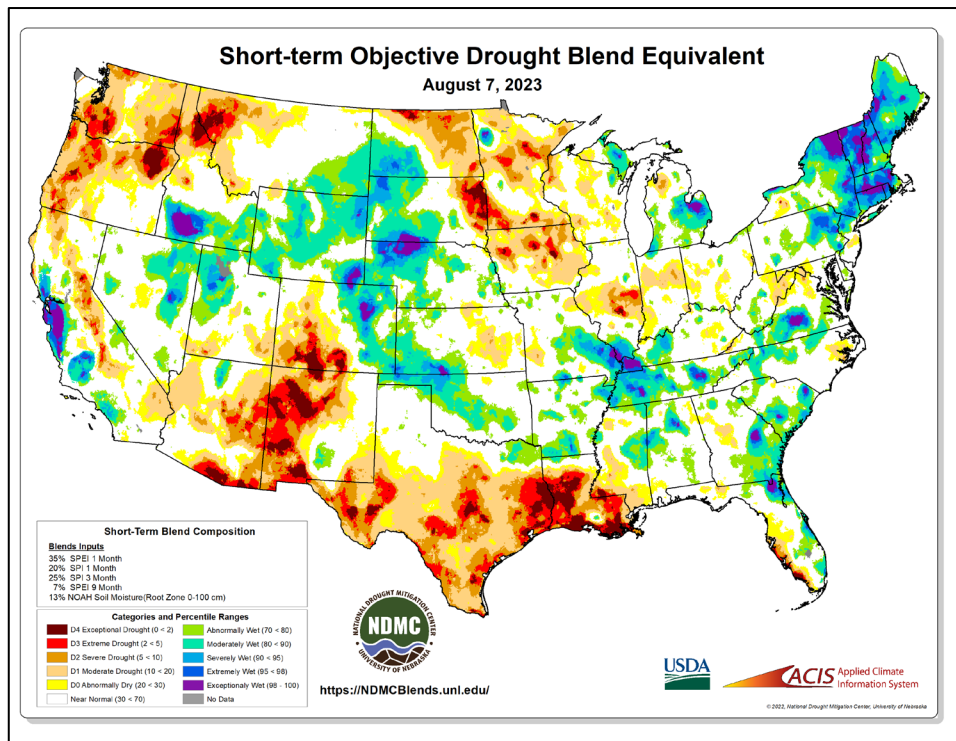
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

- Decline in 7-Day Average Stream Flows, mainly east, as compared to last month's map.

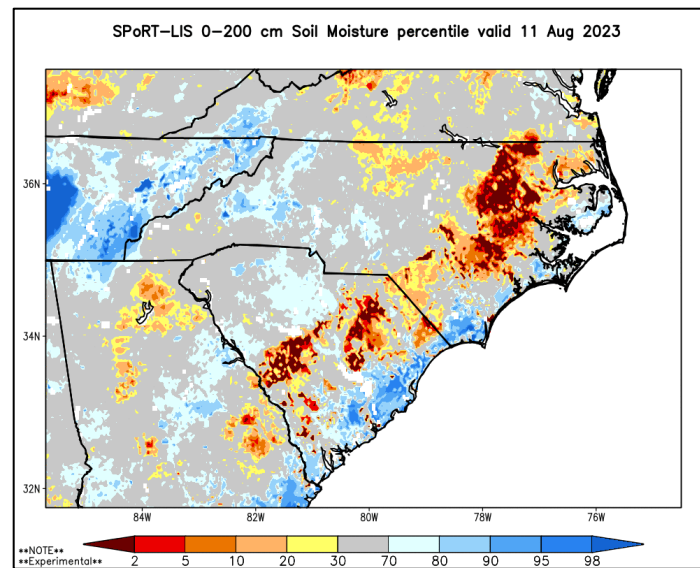
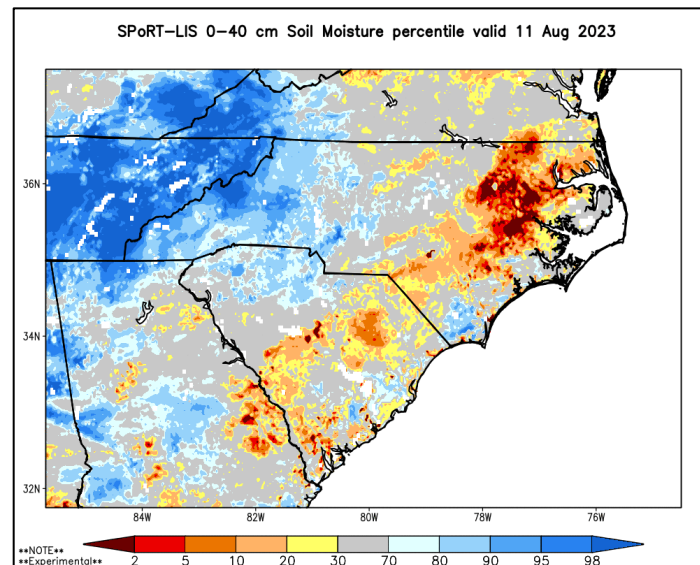
Modeled Relative Soil Dryness

SPoRT Products: 8/11/23

NDMC Short-term Drought Blend (8/7/23)



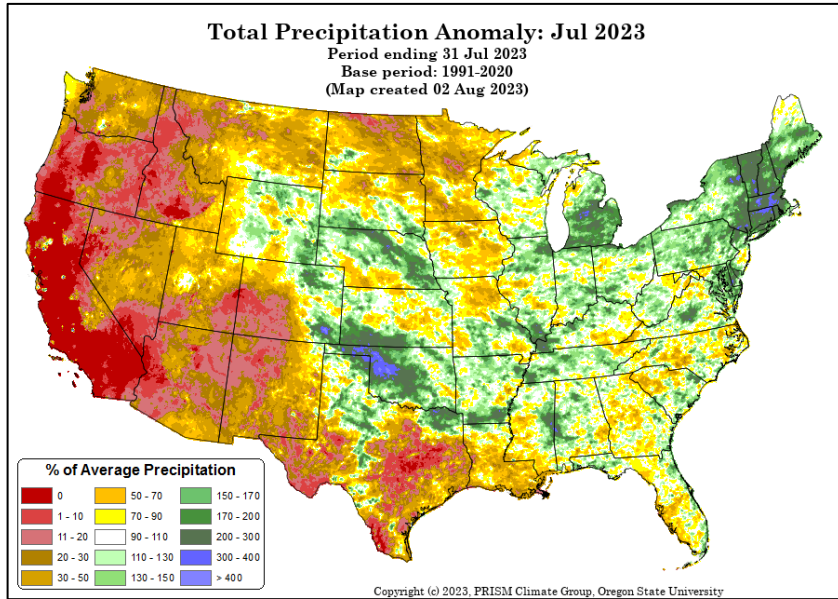
- SPoRT products are back in operation.
- Recent rainfall inputs seen on the 0-40 cm while longer term dryness visible on the 0-200 cm image.



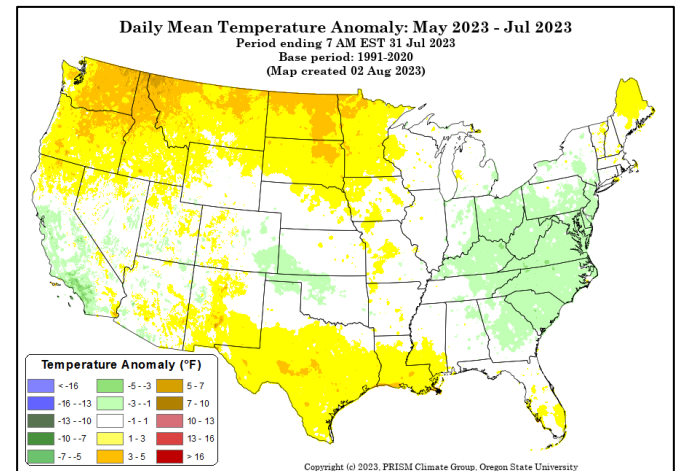
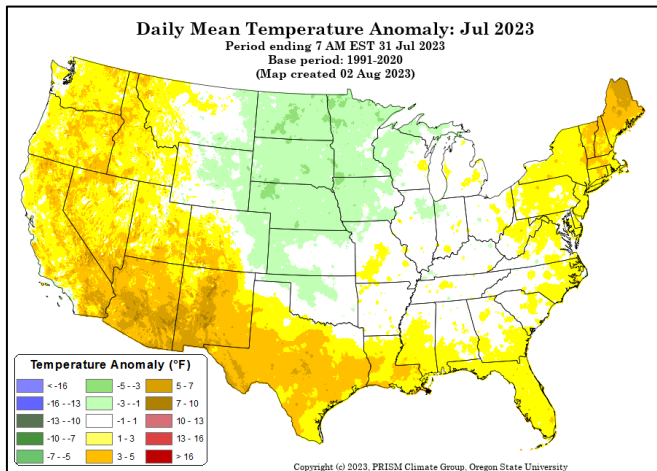
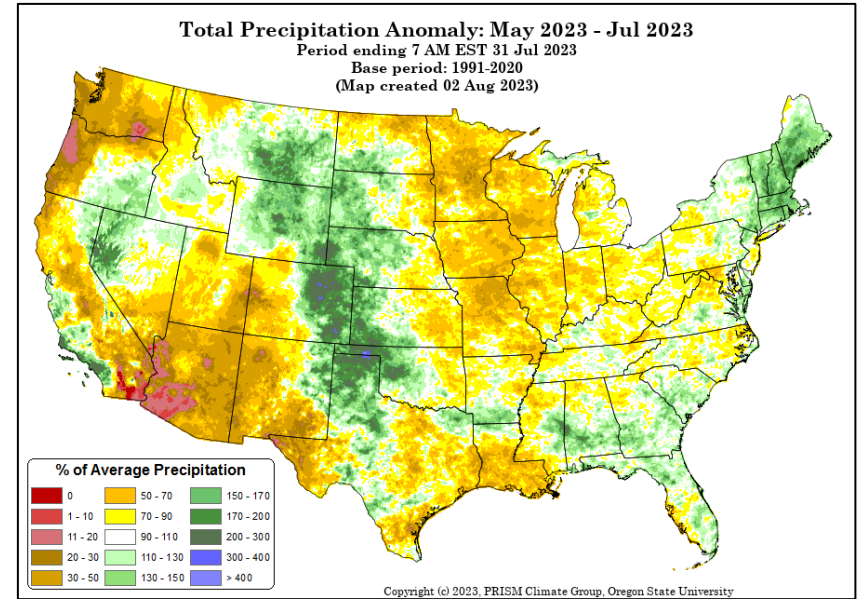
Precip and Temp Anomalies – US Context

Source: <https://prism.oregonstate.edu/mtd/>

1-Month Comparison (July 23')



3-Month Comparison (May-July 23')



ENSO Notes from the CPC (8/10/23 Update)

ENSO Alert System Status: **El Niño Advisory**

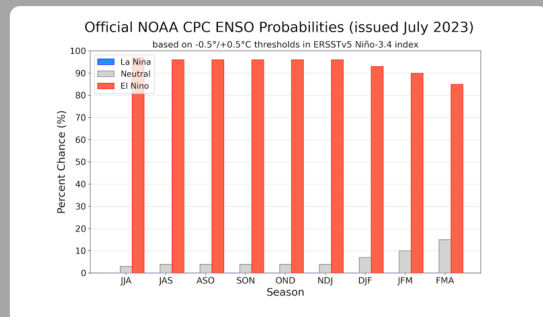
El Niño is anticipated to continue through the Northern Hemisphere winter (with greater than 95% chance through December 2023 -February 2024).

ENSO, or El Niño Southern Oscillation, is a fluctuation in the sea surface temperature (SST) in the equatorial Pacific Ocean. Research has shown that even slight changes in the SST, particularly in area 3.4, can influence weather in North America. Generally, when SSTs are lower than normal, known as La Niña, NC has drier than normal conditions and can have more fire occurrence. However, La Niña also can lead to more tropical activity. El Niño, on the other hand, usually means wetter weather for NC, but less opportunity for tropical landfalls due to increased wind shear. In order to declare a La Niña, the departure from average SST must be at least -0.5°C (line shown in green) for 3 consecutive months. For El Niño, the departure must be at least 0.5°C above average for 3 consecutive months.

CPC Probabilistic ENSO Outlook

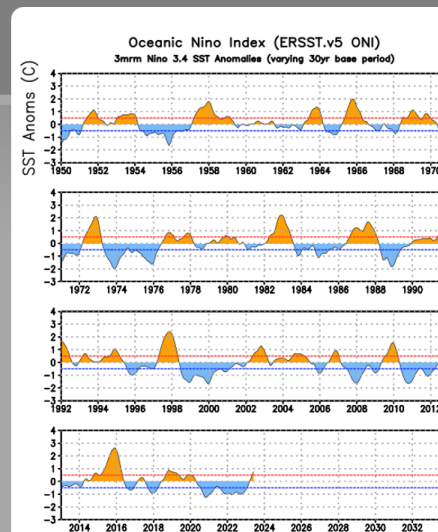
Updated: 13 July 2023

El Niño is favored through Northern Hemisphere winter 2023-24, with chances exceeding 90% for most of the period.



ONI ($^{\circ}\text{C}$): Evolution since 1950

The most recent ONI value (May - July 2023) is 0.8°C .



El Niño ↑
Neutral
La Niña ↓

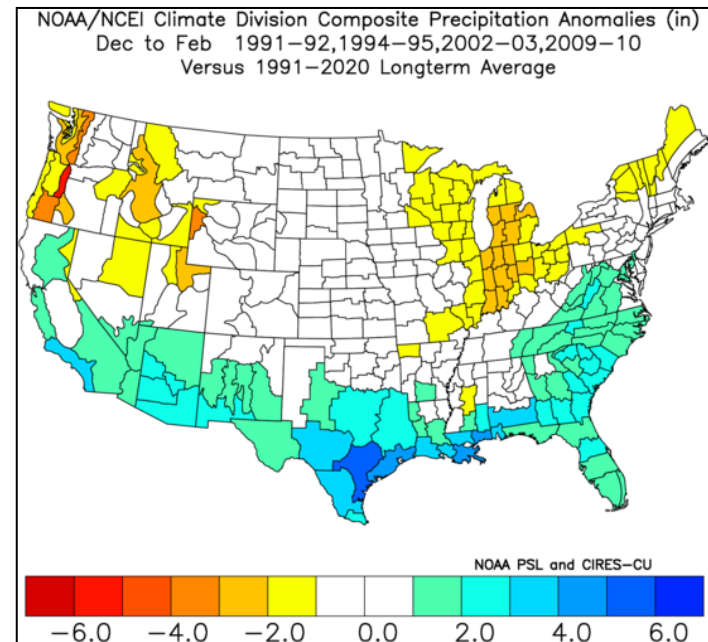
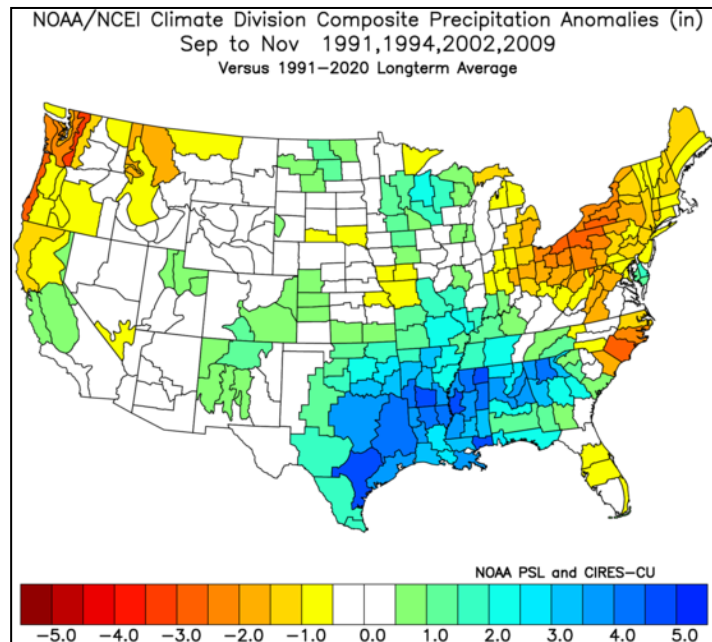
Diagnostic Discussion:

https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.shtml

Misc. El Niño Discussion

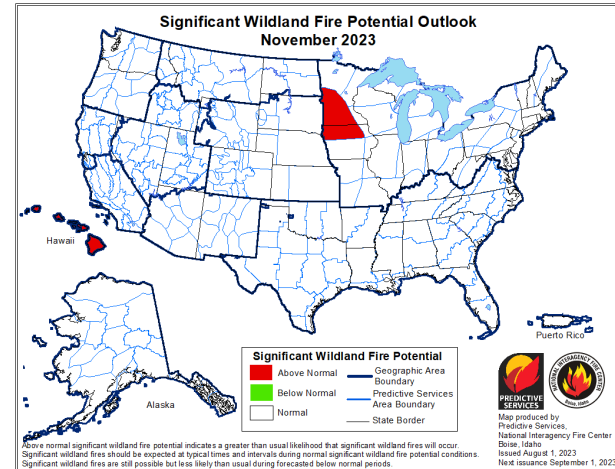
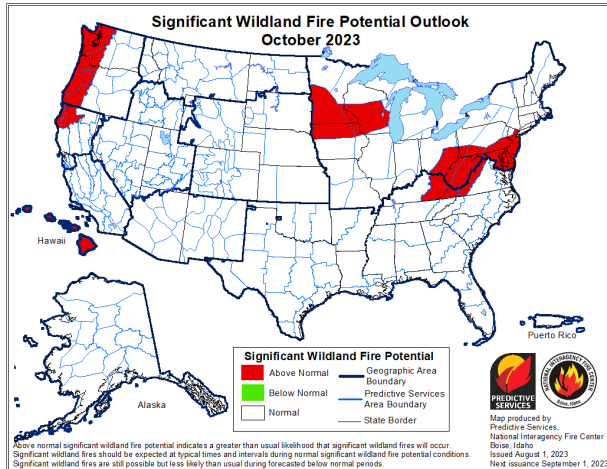
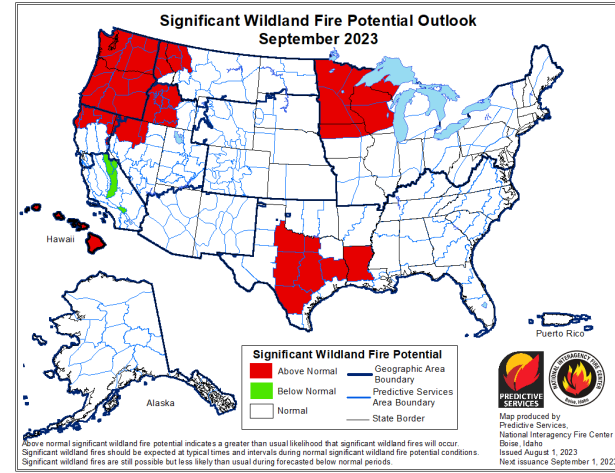
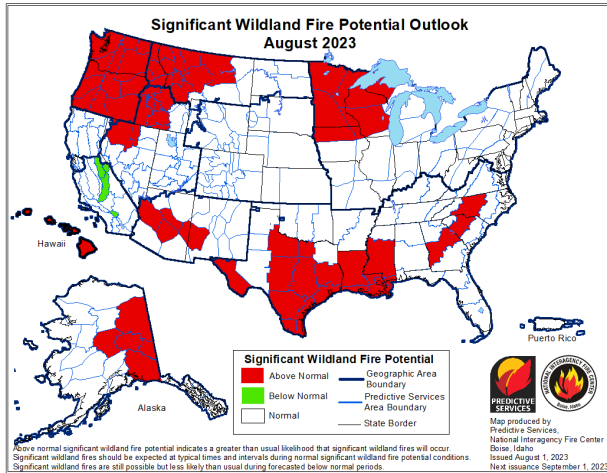
- Influence from an El Niño event generally becomes more pronounced into the winter and has fewer direct impacts in the summer of development.
- We often see warmer & drier conditions develop especially in the eastern half of the state from summer into fall before the typical transition to a “wet” winter.
- There are no close analogs at this point for NC & the strength of the developing event and exact timing of any potential pattern change is not clear or certain.
- NC SCO provided some insights/examples looking at [El Niño events](#) in the +1 to +2°C range within the past ~30 years: 1991-92, 1994-95, 2002-03, and 2009-10.

(The graphics show the fall and winter climate division-based precipitation anomalies look like for those four events.)



Significant Wildland Fire Potential Outlook:

Updated 8/1/23 – Next Update on 9/1/23

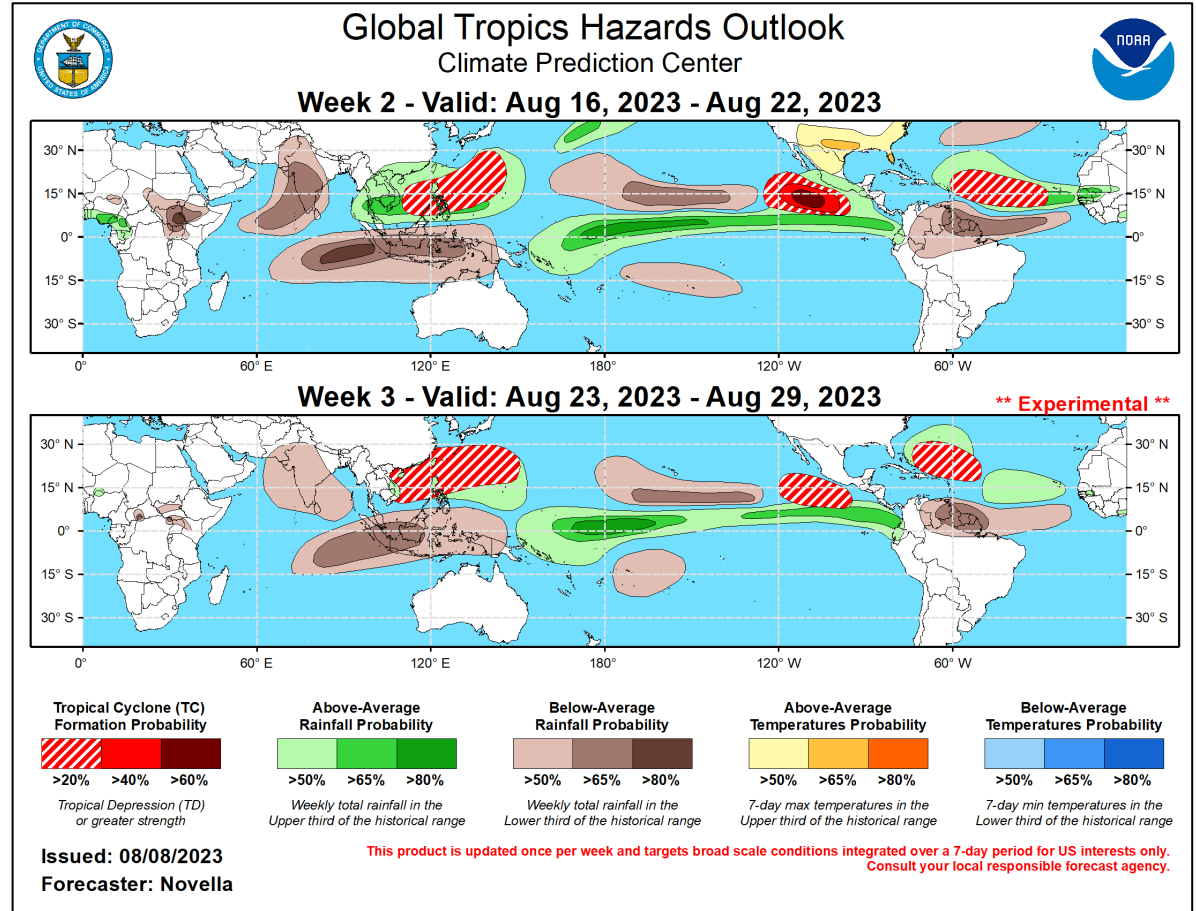
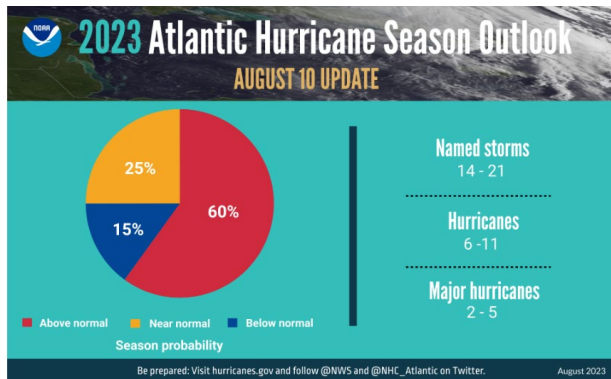


A significant fire is one that requires resources from outside the district (other than aviation). IA potential is based more on shorter term weather factors. Just a few days of dry weather can increase IA activity considerably as we have seen this year.

Tropical Hazards Outlook

General conditions look to become more favorable for tropical development going into late August and September.

However, this doesn't tell us where to expect or how strong any impacts could be.



<https://www.cpc.ncep.noaa.gov/products/precip/CWlink/ghaz/index.php>

<https://www.noaa.gov/news-release/noaa-forecasters-increase-atlantic-hurricane-season-prediction-to-above-normal>

Useful Daily Self-Briefing & Situational Awareness Links

Useful Daily Links:

Daily WIMS Observations and NFDRS Estimates

Averaged by FDRA SIG Group

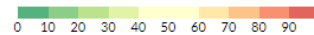
This is available on the FWIP at: <https://products.climate.ncsu.edu/fwip/nfdrs.php?data=ob&state=NC>

- The averaged values are derived from the SIG Station Outputs for a particular FDRA
(SIG station names shown in bold on the live link above)
- You can toggle the percentiles on/off, displaying below the actual calculated values
these percentiles are based on analysis of "All Days" for entire calendar year range through 2021 for these stations

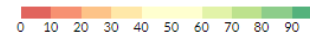
Daily Observations for 8/11/23

Averages by FDRA																		
FDRA	STATION_COUNT	NFDR_DATE	BI	ERC	IC	SC	KBDI	1HR	10HR	100HR	1000HR	HRB	WOODY	TEMP	RH	WIND	PRECIP	DUR
Southern Highlands	3	2023-08-11	2.23 10.9%	0.27 11.0%	0.07 17.2%	2.30 12.1%	335.67	28.77 90.4%	29.77 93.9%	24.66 94.0%	22.90 87.0%	149.13	131.67	76.0°F	82.7%	SE 3.0 mph	0.14 in.	8.0
Central Mountains	3	2023-08-11	8.97 14.3%	5.73 18.3%	0.50 26.3%	2.03 12.1%	330.67	19.69 77.1%	22.55 79.2%	21.15 73.1%	21.40 68.1%	250.00	200.00	76.7°F	69.7%	E 0.3 mph	0.00 in.	0.0
Northern Highlands	2	2023-08-11	17.50 29.9%	8.40 28.8%	1.30 34.2%	5.50 38.6%	53.50	16.12 59.3%	21.42 68.3%	21.75 82.1%	22.47 80.1%	250.00	200.00	75.0°F	70.0%	SSW 1.5 mph	0.02 in.	1.0
Blue Ridge Escarpment	3	2023-08-11	31.13 43.5%	15.50 38.2%	2.23 30.4%	11.13 52.0%	146.33	15.48 65.3%	20.06 65.0%	22.42 75.6%	21.92 78.2%	184.00	155.00	79.3°F	68.0%	SSW 2.3 mph	0.00 in.	0.0
Western Piedmont	3	2023-08-11	33.90 44.8%	24.47 50.0%	4.20 41.0%	8.13 39.4%	439.33	12.40 55.3%	19.09 70.4%	20.29 72.4%	20.79 76.6%	156.00	136.33	85.7°F	52.7%	S 2.7 mph	0.00 in.	0.3
Sandhills	3	2023-08-11	42.13 66.3%	37.73 46.3%	11.23 64.7%	9.40 86.5%	556.33	10.34 32.4%	19.53 73.4%	20.64 78.1%	20.36 64.0%	144.50	130.67	88.3°F	47.7%	W 3.3 mph	0.00 in.	0.0
Eastern Piedmont	4	2023-08-11	50.95 26.1%	28.28 32.2%	7.25 48.1%	17.58 23.5%	382.25	11.42 39.1%	18.61 67.7%	20.06 68.6%	19.78 62.9%	132.63	127.00	86.3°F	50.3%	WNW 5.5 mph	0.00 in.	0.0
Southern Coastal	7	2023-08-11	27.37 20.4%	22.84 34.2%	4.24 36.4%	5.79 14.7%	458.00	11.35 35.5%	17.54 57.8%	18.77 57.8%	20.77 46.5%	220.91	184.00	91.7°F	48.1%	SW 3.1 mph	0.25 in.	0.7
Northern Coastal	4	2023-08-11	22.93 17.0%	22.18 31.5%	3.68 35.0%	3.83 10.3%	456.50	11.19 36.6%	17.60 63.0%	18.35 38.0%	19.75 55.0%	197.53	164.50	90.0°F	49.3%	SW 4.5 mph	0.13 in.	1.0

BI/ERC/IC/SC
Percentiles (%)
(based on all days through 2021)



Fuel Moisture
Percentiles (%)
(based on all days through 2021)



Useful Daily Links:

Daily WIMS Forecast Observations and NFDRS Estimates

Averaged by FDRA SIG Group

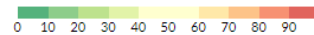
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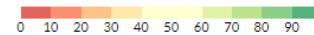
Daily Forecast for 8/12/23 (issued on 8/11)

Averages by FDRA																		
FDRA	STATION_COUNT	NFDR_DATE	BI	ERC	IC	SC	KBDI	1HR	10HR	100HR	1000HR	HRB	WOODY	TEMP	RH	WIND	DUR1	DUR2
Southern Highlands	3	2023-08-12	29.03 47.7%	11.43 31.3%	2.37 38.7%	12.10 62.0%	335.67	15.66 63.0%	23.20 78.1%	24.21 90.7%	23.06 87.0%	155.13	135.33	84.7°F	59.7%	NW 5.0 mph	0.3	0.0
Central Mountains	3	2023-08-12	22.57 37.3%	11.57 32.0%	2.50 51.9%	7.07 48.8%	330.67	14.37 54.7%	21.72 75.5%	20.44 62.9%	21.56 83.1%	250.00	200.00	88.0°F	51.3%	NW 5.3 mph	0.7	0.0
Northern Highlands	2	2023-08-12	21.65 38.1%	10.05 34.0%	2.25 47.0%	7.25 45.0%	53.50	14.70 53.8%	20.72 68.3%	20.83 73.3%	22.60 91.2%	250.00	200.00	81.0°F	55.0%	WNW 5.5 mph	0.0	0.0
Blue Ridge Escarpment	3	2023-08-12	35.13 51.0%	16.77 41.0%	3.33 38.3%	13.20 56.0%	146.33	14.06 61.1%	19.94 65.0%	20.48 58.2%	21.67 78.2%	187.00	157.33	87.0°F	53.0%	WSW 4.0 mph	0.0	0.0
Western Piedmont	3	2023-08-12	32.03 41.4%	19.60 38.1%	3.30 32.4%	9.20 43.1%	439.33	13.62 69.1%	18.71 70.4%	19.23 62.7%	20.90 76.6%	163.50	140.33	90.3°F	54.0%	W 3.7 mph	0.0	0.0
Sandhills	3	2023-08-12	29.30 31.5%	32.60 37.1%	5.00 33.6%	4.67 47.6%	556.33	13.20 64.7%	19.39 68.3%	19.37 55.6%	20.38 64.0%	148.47	134.00	92.0°F	51.7%	W 2.7 mph	0.0	0.0
Eastern Piedmont	4	2023-08-12	40.35 21.0%	25.08 29.0%	4.75 36.2%	11.68 16.7%	382.25	12.73 59.9%	18.13 61.5%	18.85 55.5%	19.82 62.9%	134.95	126.75	91.3°F	54.5%	WSW 3.3 mph	0.0	0.0
Southern Coastal	7	2023-08-12	23.33 16.9%	18.24 25.2%	2.79 29.1%	4.87 11.7%	458.00	13.13 56.4%	18.48 57.8%	18.23 30.4%	20.63 64.1%	220.81	185.57	90.6°F	58.4%	SW 2.9 mph	0.0	0.0
Northern Coastal	4	2023-08-12	28.55 20.8%	20.08 28.1%	3.70 35.0%	6.88 15.5%	456.50	12.54 58.4%	17.59 63.0%	18.03 38.0%	19.68 55.0%	194.03	166.50	89.8°F	58.8%	SSW 5.5 mph	0.0	0.0

BI/ERC/IC/SC
Percentiles (%)
(based on all days through 2021)



Fuel Moisture
Percentiles (%)
(based on all days through 2021)



Useful Daily Links:

Weekly Outlook - FDRA General Fire Danger Forecast Matrix:

- Available on the FWIP within the “[Resources for NCFs](#)” page.
- The operation link is: <https://products.climate.ncsu.edu/fwip/outlook.php>
- The matrix updates daily - please review the tool notes below for more details.
- For the 9 FDRAs in North Carolina

Weekly Outlook								
Eastern Piedmont FDRA - General Fire Danger Forecast								
For planning purposes only; forecast is subject to change								
Four or more RED blocks in a day signals the potential for a Critical Fire Day								
DAY	SAT 12-Aug	SUN 13-Aug	MON 14-Aug	TUE 15-Aug	WED 16-Aug	THU 17-Aug	FRI 18-Aug	
Avg. Max. Temp. (°F)	93	97	93	91	88	90		
Avg. Min. Humidity (%)	49	53	62	57	50	50		
Avg. 20' Wind Speed (mph)	4	4	10	12	7	7		
Avg. Wind Direction*	SW	SW	SSW	WSW	SSW	SW		
Avg. Probability of Precip. (%)	5	23	36	40	16	19		
Days Since a Wetting Rain**	1.0	2.0						
Forecast ERC (Fuel Model X)	25.1	24.9	24.1	24.3	24.6	19.9	20.4	
Forecast BI (Fuel Model X)	40.4	46.5	48.5	55.2	37.4	36.6	36.4	
Forecast IC (Fuel Model X)	4.8	5.2	4.8	5.7	3.9	3.3	3.5	
Forecast 100-Hr. FMC	18.9	18.1	17.8	17.9	17.9	18.0	17.9	
Forecast 1000-Hr. FMC	19.8	19.8	19.7	19.6	19.5	19.4	19.3	
KBDI	382.3							

Source:

- Weather forecasts come from the National Weather Service's [Digital Forecast Database](#). The wind speed and direction, and probability of precipitation, are calculated as averages of the 1 am, 7 am, 1 pm, and 7 pm forecasts. The 20-foot wind speed is estimated from the 10-meter forecast using the log wind profile method.
- Days since a wetting rain is calculated using a combination of historical data (to determine the most recent wetting rain event) and forecasted precipitation amounts. These forecasted amounts are only available for the first three days of the forecast period.
- Fire danger forecasts for the next 7 days are issued by National Weather Service through WIMS. KBDI is only available on the first forecast day since the [NFDRS Forecast](#) product does not include precipitation amounts, which are used to adjust KBDI from day to day.

Values in the table above are averages from 4 stations in this FDRA:

- Oxford Tobacco Research Stn (310941)
- Upper Coastal Plain Res Stn (312940)
- Lake Wheeler Rd Field Lab (314941)
- Central Crops Research Station (317441)

KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCHOUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 10 mph	Between 10 mph and 15 mph	Greater than 15 mph
Avg. Wind Direction*	Criticality of wind direction is highly dependent on burn operations and/or structures threatened.		
Days Since a Wetting Rain**	A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted above.		
Energy Release Comp.	Less than 54.2	Between 54.2 and 61.7	Greater than 61.7
Fire Index	Less than 109.3	Between 109.3 and 130.5	Greater than 130.5
Ignition Component	Less than 12.7	Between 12.7 and 16.8	Greater than 16.8
100-Hour Fuel Moisture	Greater than 17.6%	Between 16.4% and 17.6%	Less than 16.4%
1000-Hour Fuel Moisture	Greater than 18.3%	Between 17.5% and 18.3%	Less than 17.5%
KBDI	Less than 337	Between 337 and 460	Greater than 460

Other factors to consider when determining fire danger: sky conditions, precipitation amount, number of days since rain, and season

Tool Summary:

The forecast matrix was created using **standard NFDRS and weather forecast data**:

- Weather conditions and NFDRS outputs are forecasted over the next 7 days by NWS for SIG stations in each FDRA.
- Weather variable ranges and breakpoints were defined by FDRA stakeholders and relate to Pocket Card notes.
- Maximum temperatures in the Critical range are color-coded with shades of red to help visually distinguish daily variations. The brightest red color corresponds to temperatures of 100°F or greater.

Fire danger forecast indices and component values are grouped into three categories based on historical percentiles, assessed using the FF+ All Days filter through 2021:

- Low to Moderate (0 to 74th percentile); shown in **blue-green**
- High (75th to 89th percentile); shown in **yellow**
- Very High to Extreme (90th+ percentile); shown in **red** and labeled as Critical

Dead fuel moisture forecast values are grouped into three categories based on historical percentiles, assessed using the FF+ All Days filter through 2021:

- Low to Moderate (26th to 100th percentile); shown in **blue-green**
- High (11th to 25th percentile); shown in **yellow**
- Very High to Extreme (0 to 10th percentile); shown in **red** and labeled as Critical

Other Notes:

- Read the key and notes for each FDRA, included on the outlook matrix page.
- Forecasts are variable and can change significantly over a forecast cycle and across the landscape.
- This is another tool for gaining better situational awareness, and should be used for general planning purposes only.
- The outlook matrix is refreshed when an FDRA is selected, using the most recent forecast data available at that time. The 7th day may drop off or display partial data prior to the afternoon/evening forecast update.
- Daily updates to NFDRS forecasts occur around 1530 daily, while general weather forecasts are updated around 1730 daily.



Useful Daily Links:

Southern Area Daily Outlook Page:


<https://gacc.nifc.gov/sacc/resources/predictive/sacc-daily-outlook.pdf>

SACC Daily Outlook

Friday, August 11, 2023

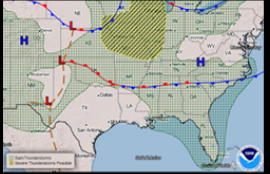


Watches and Warnings as of 0800 EDT



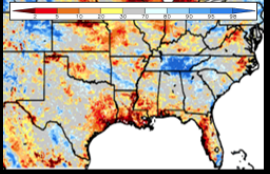
- **Red Flag Warnings:** much of southwest, central and north TX today
- **Fire Weather Watches:** none
- **Excessive Heat Warnings and/or Heat Advisories** in effect across TX, OK, AR, LA, MS, TN, AL, GA, FL, PR and the USVI

Today's Weather Outlook



- A way frontal boundary will focus showers and storms from OK into parts of the Southeast today; most of this activity will be scattered, but local flash flooding is possible this morning
- Isolated, gusty thunderstorms may affect west and northwest TX, though coverage will be lower than yesterday, except in the mountains
- Look for scattered pop-up storms across the FL peninsula
- Very hot conditions will prevail from TX to the Lower Mississippi Valley, where breezy conditions, low afternoon RH and dry fuels will maintain widespread very high fire danger



NASA-SPoRT Soil Moisture Percentiles



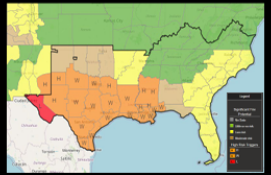
- After a long hiatus, NASA-SPoRT soil moisture products have been returned to service; the image depicts percentiles in the 0-100mm layer
- The drier soils generally line up with where much drier and hotter weather than normal has been in place this year, along and inland from the Gulf Coast from FL to FL
- Rapid **moistening** is indicated over the past 3-6 weeks in all soil moisture layers over southern MS, southern AL and parts of the FL panhandle; the Alabama Forestry Commission - the cause of this rapid drop in water levels in the park's creek is yet to be determined, and AFS will be conducting live leaf moisture samples later today to determine what impact this event may be having
- Unusual dryness with values below the 5th percentile continue in scattered areas of NC, VA, KY and farther west
- Saturated soils are in place across much of the Tenn. Valley, southern Appalachians, far southeast FL and smaller areas elsewhere, which may exacerbate flooding in any heavy rain events the next few weeks

SACC Daily Outlook

Friday, August 11, 2023

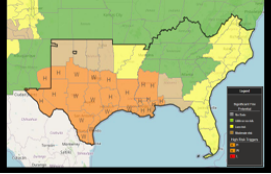


Predictive Services Significant Fire Potential Today



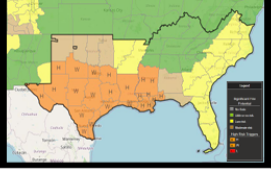
- **HIGH RISK (W):** stronger winds will return to much of TX today, where near-record to record heat will be widespread and fire risk will remain the next few days, except in the west. Risks of 20-30 mph due to sea breeze for all of south, central and east TX, with gusts to 40 mph in the north. In the afternoon, similar to yesterday, meanwhile, expect sea breeze to produce gusty winds and high to near 20 mph gusts in the north and west TX today, when westerly rain occurred but on a localized basis, isolated storms today may bring some relief
- **HIGH RISK (H):** relatively lighter winds are expected in these PSAs; however, very hot, record-breaking high temperatures are likely in these areas this afternoon in all of these PSAs, so TX, MS and Greater Dismal Storms, are possible today
- **HIGH RISK (L):** new lightning ignitions and hotspots are possible for the TX mountains. Look for gusty and erratic winds, as well as offshore, very hot and dry weather will precede the activity
- Far southern OK will see similar conditions to north TX
- Thunderstorms will be a bit more numerous across the Southeast, and lightning ignitions/hotspots are possible in some areas, though wetting rain is expected by the end of the day for most of the Carolinas into GA

Predictive Services Significant Fire Potential Saturday



- **HIGH RISK (W):** very hot, dry and breezy conditions will prevail Saturday throughout much of north, central and south TX into coastal southern and central Mississippi, and into the Gulf of Mexico. Fuel moisture levels around the coast this day, especially where not necessary at night, has been mostly dry or rainfall has occurred, but critically dry at night will be in the areas of extreme low humidity forecasted in the east and east TX. RH will be a few points lower for inland areas than today
- **HIGH RISK (H):** very hot conditions along with low afternoon RH and gusty winds will affect the rest of LA into north of central and southern MS and far southern AL; spotty storms could affect these areas in the afternoon, leading to a risk for lightning ignitions from ongoing heat/dryness, meanwhile, east TX and west TX will continue to see very hot and dry conditions, with lightning, lighter winds in these areas as compared to the middle of the state; isolated storms may affect the TX mountains
- Some OK PSAs could be upgraded to a **HIGH RISK** due to increased heat and winds
- Hot and dry weather will affect areas east and south of the Appalachians, while spotty thunderstorms could contribute to new starts in the deep parts of the FL peninsula



Predictive Services Significant Fire Potential Sunday



- **HIGH RISK (W):** Sunday's heat and winds will be similar to Saturday for much of TX, but RH may drop below 30% in scattered areas of north and central TX; sea breezes will bring higher gusts near the coast of TX and LA in the afternoon, with the strongest winds expected over south TX
- **HIGH RISK (H):** Triple-digit heat will be widespread in west and east TX into LA, MS and AL, (60s for most of the beaches), with RH as low as 25-50% (highest near the coast); isolated thunderstorms could contribute to ignitions across eastern LA, MS and AL, and some of these PSAs may be converted to a lightning trigger depending on coverage of 1-5 Sunday
- Much of southern OK will see very hot, dry and breezy conditions and will be upgraded to a **HIGH RISK** in coordination with any potential Red Flag Warnings issued in the area
- Very hot conditions will continue for lower elevations in the east, from VA to GA and FL; an upgrade to Moderate Risk is possible for some of these PSAs, depending on rainfall today

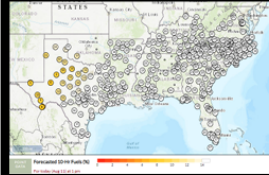
SACC Daily Outlook

Friday, August 11, 2023



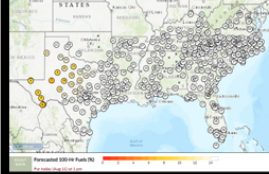
Fire Weather Intelligence Portal (ncsu.edu)

10-Hour Fuels




- 10-hour fuels will undergo some drying the next few days across interior TX and LA into MS, while coastal areas will see rapidly changing conditions due to overnight RH recovery and rapid drying during the day
- A front coming into the Plains and Mississippi Valley next week does not offer much hope for improvement, though 1- and 10-hour fuels moisture could temporarily increase on a modest basis over north TX Tuesday
- Look for a drying trend in areas from AL and GA to VA, especially away from the mountains and coast heading into next week

100-Hour Fuels



- 100-hour dead fuel moisture will see a steady or slight drying trend for west and north TX into OK and parts of the Mississippi Valley into next week, while overnight RH recovery near the coast may lead to a very slight improvement (which is especially clear via NFDRSv4 forecasts)
- Look for a drying trend in eastern areas, especially the coastal plain and piedmont, next week

Keetch-Byram Drought Index (KBDI)



- The footprint of KBDIs above 700 continues to expand across western and southern parts of the region and now covers most of TX and LA into parts of central and southern MS, southern AL and the western FL panhandle
- Additional increases in KBDIs are likely into next week in these areas given much above normal temperatures and little to no rainfall, and some areas are likely to see values max out at 800 over the next 1-2 weeks; an uptick in KBDIs over southern OK is also likely
- Some improvement has occurred on a local basis for the Carolinas, GA and VA the past few days, with additional rainfall in some of these areas today, but hot and dry weather will likely reverse this trend by next week

Product is generally updated weekdays (three example images from 8/11 Outlook shown)

NC DAQ Air Quality Forecast - Next Three Days


The [North Carolina Division of Air Quality](#) issues forecasts for fine particulate matter year-round and ozone from March through October. Forecasts and discussions are updated each afternoon for the next three days, and are sometimes updated in the morning to reflect the latest ambient conditions.

View: The latest forecast discussion The forecast discussion from

This forecast was issued on **Friday, August 11, 2023 at 1:39 pm.** ✔ This forecast is currently valid.

Today's Air Quality Conditions

Air quality levels are in the Code Green range statewide this afternoon.

 For a display of the most recent Air Quality Index (AQI) conditions throughout the day, visit the [Ambient Information Reporter \(AIR\) tool](#).

General Forecast Discussion

A building upper level ridge over the Ark-La-Tex will keep the air mass source continental through the weekend, with high temperatures approaching triple digits. Despite this, precipitable values are projected to continue to rise, indicating a moist, tropical-like air mass. The current air mass over the aforementioned region remains clean at this time, and will continue to carry a Code Green forecast through the weekend at this time based on the above evidence.






Outlook

Monday, a moist air mass remains entrenched as the region remains sandwiched between Bermuda high pressure offshore and a strong 594 + dm ridge over the Deep South. An approaching upper level low will result in rapidly falling heights on Monday along with mid-level winds turning southwesterly. These conditions combined with the very moist air mass in place will likely spark showers and thunderstorms during the afternoon. For now, will hold the air quality forecast in the Code Green range for Monday based on these factors.

Author: *McLamb* - NC Division of Air Quality

Extended Air Quality Outlook

The forecast Air Quality Index value for each pollutant represents the highest value expected within each county, so some areas and monitors may see lower values. We use the best information and techniques available to ensure the quality and accuracy of the forecasts we provide to the public. Note that ranges do *not* include the nine-county Triad region, which is covered by the Forsyth County Office of Environmental Assistance and Protection.

Forecast Day	AQI Range	Category Range	Download KML
Friday (Aug 11)	40 to 50	Green	 download
Saturday (Aug 12) 	45 to 50	Green	 download
Sunday (Aug 13)	45	Green	 download
Monday (Aug 14)	45	Green	 download

Statewide Summary Notes

Fire Activity Discussion:

- Summer 2023 has continued to see normal overall activity (in statewide occurrence context).
- IA Activity has increased during periods of lower RH's, higher temps/winds aligning with decline in moisture of herbaceous fuels – especially road shoulder grasses in previously noted dry areas.
- Four Month Outlook (see Significant WF Potential Outlook Slide)
 - Above Normal Activity now favored for the Piedmont for August due to drying trends.
 - Normal Activity favored statewide for September, October, November
- Texas continues to see fuel and fire behavior conditions worsen – see latest advisory [here](#).

Climate/Weather Discussion:

- The Climate Prediction Center forecasts a building El Niño this fall/winter.
 - Influence from an El Niño event generally becomes more pronounced into the winter and has fewer direct impacts in the summer of development.
 - We often see warmer & drier conditions develop especially in the eastern half of the state from summer into fall before the typical transition to a “wet” winter.
 - There are no close analogs at this point for NC & the strength of the developing event and exact timing of any potential pattern change is not clear or certain.
- At present we are in the typical summer thunderstorm pattern (generally scattered distribution of rains with lightning).
- Hurricane Season began on June 1 and has been relatively quiet recently – things look to potentially get more active later in August and into September.
- For the August – October Period from the CPC 3-Month Outlook:
 - Above normal temperatures are favored.
 - Slightly above normal precipitation chances are also weakly favored.
- However, if significant rain events continue to be suppressed & very high evaporative demands/plant stress continue - this could lead to rapid drying of live fuels and enhance fire danger earlier than normally encountered.
- Still much uncertainty this far out in time – but the potential for rapid onset or enhanced drought conditions should be monitored closely.

Fuels/Drought Discussion:

- Relative greenness & scattered rain events are holding most of state in normal seasonal pattern of fire activity.
- Still experiencing seasonal higher daily minimum rh's & good night-time recovery.
- Dead Fuels Moistures and Indices (FM-X) have continued to trend slightly "hotter" or near seasonal averages (see FWIP).
- However, KBDI values and other indicators of relative dryness continue to increase, especially in previously noted areas.
- "Lightning Season" ignition risk continues, especially on areas of drying organic soils or deep organic duff.
- ~16% of State in "D0" Abnormally Dry Conditions as of last USDM update.
- The [US Monthly Drought Outlook](#) released on July 31st for August continues to favor larger-scale drought free conditions for NC.
- However, if drought conditions were to significantly expand/intensify in combination with further high plant evaporative demand, overall initial attack activity and mop-up demands would be expected to increase for those areas (as more live fuel becomes available to burn).