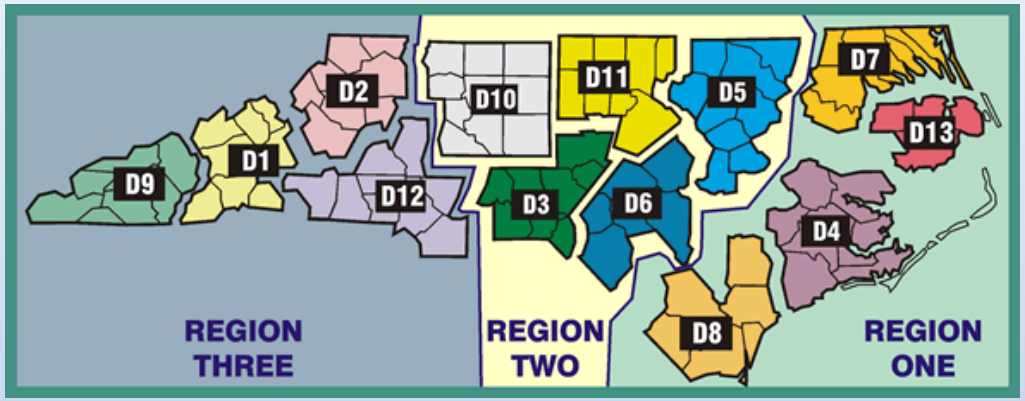


Statewide Seasonal Fire Danger Assessment

- August 27, 2024 Update -

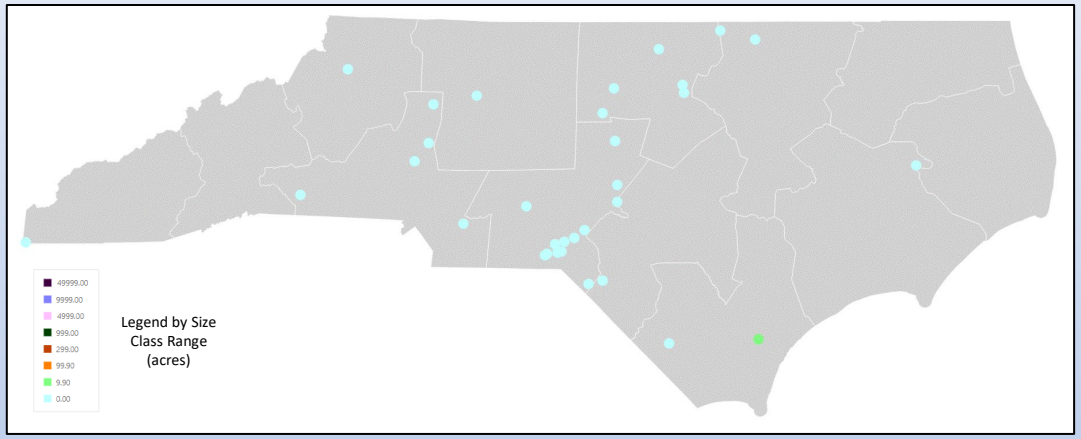
Created by: Jamie Dunbar
Fire Environment Staff Forester
NC Forest Service

Incident Activity

fiResponse Incident Location Map (for general context, preliminary data)

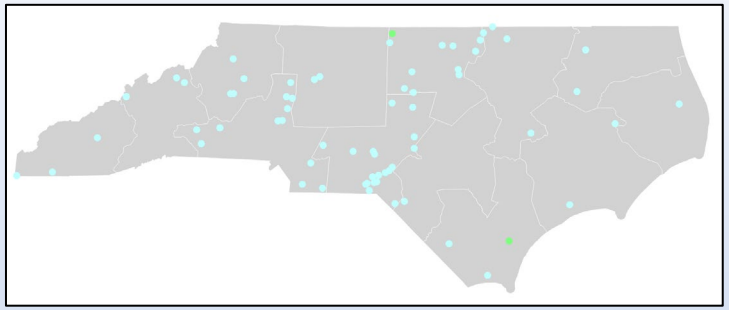
7-Day Activity: 8/20 – 8/26, 2024

Report: Business Intelligence Module, Response Trends Map



NCFS – By Region				
MTD Fire Activity (Does Not Include Federal Ownerships)				
Data Source:	Signal 14 Regional Activity Summary Report (Signal 14 is a daily snapshot in time)			
Date Range:	8/1 – 8/26, 2024			
Area	Wildfire Count	Wildfire Acres	RX Count (State & Private)	RX Acres (State & Private)
R1	7	48.5	2	221
R2	30	22.2	13	795
R3	12	1.9	0	0

MTD (8/1-8/26)



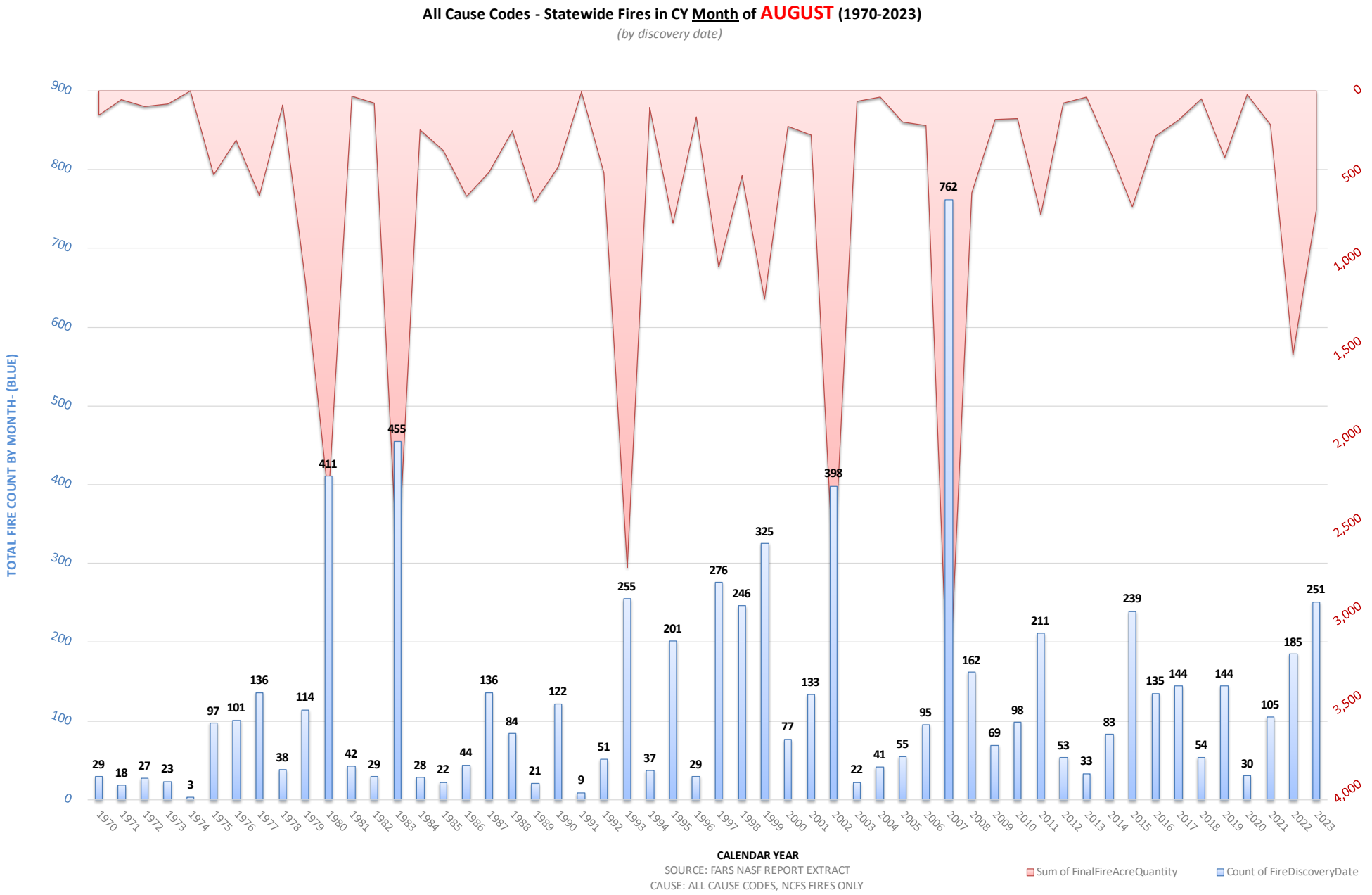
Statewide Context

January: 10-yr avg is 326 fires for 524 acres
February: 10-yr avg is 576 fires for 1,494 acres
March: 10-yr avg is 913 fires for 4,727 acres
April: 10-yr avg is 659 fires for 6,481 acres
May: 10-yr avg is 317 fires for 1,241 acres
June: 10-yr avg is 221 fires for 2,408 acres
July: 10-yr avg is 183 fires for 626 acres
***August: 10-yr avg is 137 fires for 420 acres**
September: 10-yr avg is 171 fires for 383 acres
October: 10-yr avg is 226 fires for 1,895 acres
November: 10-yr avg is 465 fires for 6,046 acres
December: 10-yr avg is 277 fires for 427 acres

(10-yr Statewide averages, above, are based on FARS 2014-2023 Data)

Largest incidents **MTD** (Ending 8/26):
from fiResponse & preliminary reporting only

Incident Name	Discovery Date	Region	District	County	Acres
Hwy 421 Fire	8/23/2024	Region 1	District 8	New Hanover County	47.00
Cow Pasture	8/15/2024	Region 2	District 11	Caswell County	10.00
Homanit Usa Rd	8/24/2024	Region 2	District 3	Montgomery County	5.00
Forsyth County - Harper Road	8/24/2024	Region 2	District 10	Forsyth County	2.00
Lighthouse Church Rd	8/4/2024	Region 2	District 3	Montgomery County	1.00
North Cambridge Fire	8/18/2024	Region 1	District 4	Onslow County	1.00
Bryant St	8/25/2024	Region 2	District 3	Richmond County	1.00
Sunrise Pasture	8/22/2024	Region 2	District 11	Granville County	0.60
Leak Rd	8/1/2024	Region 2	District 3	Montgomery County	0.50
Moriah Cutover	8/7/2024	Region 3	District 12	Cleveland County	0.50

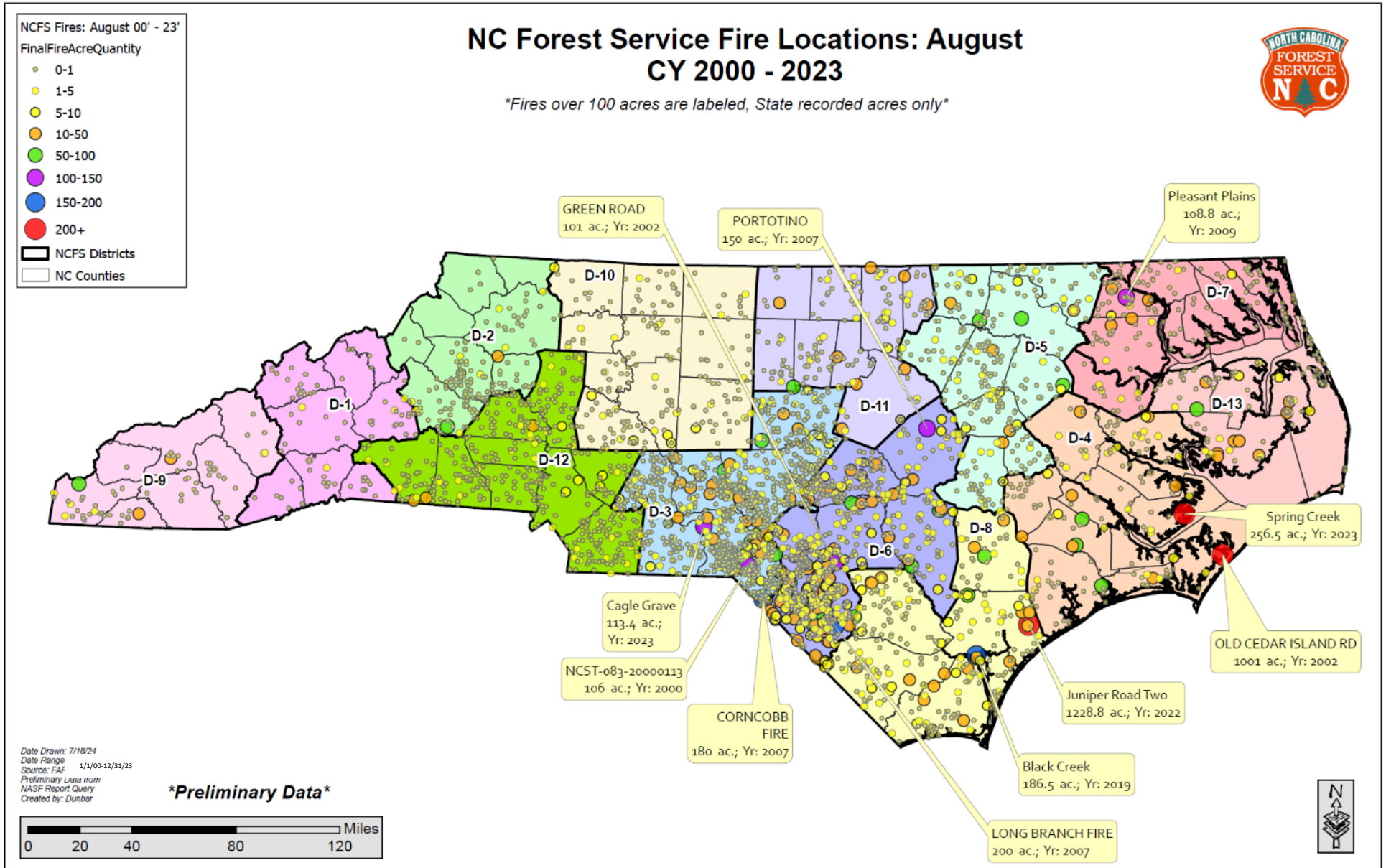


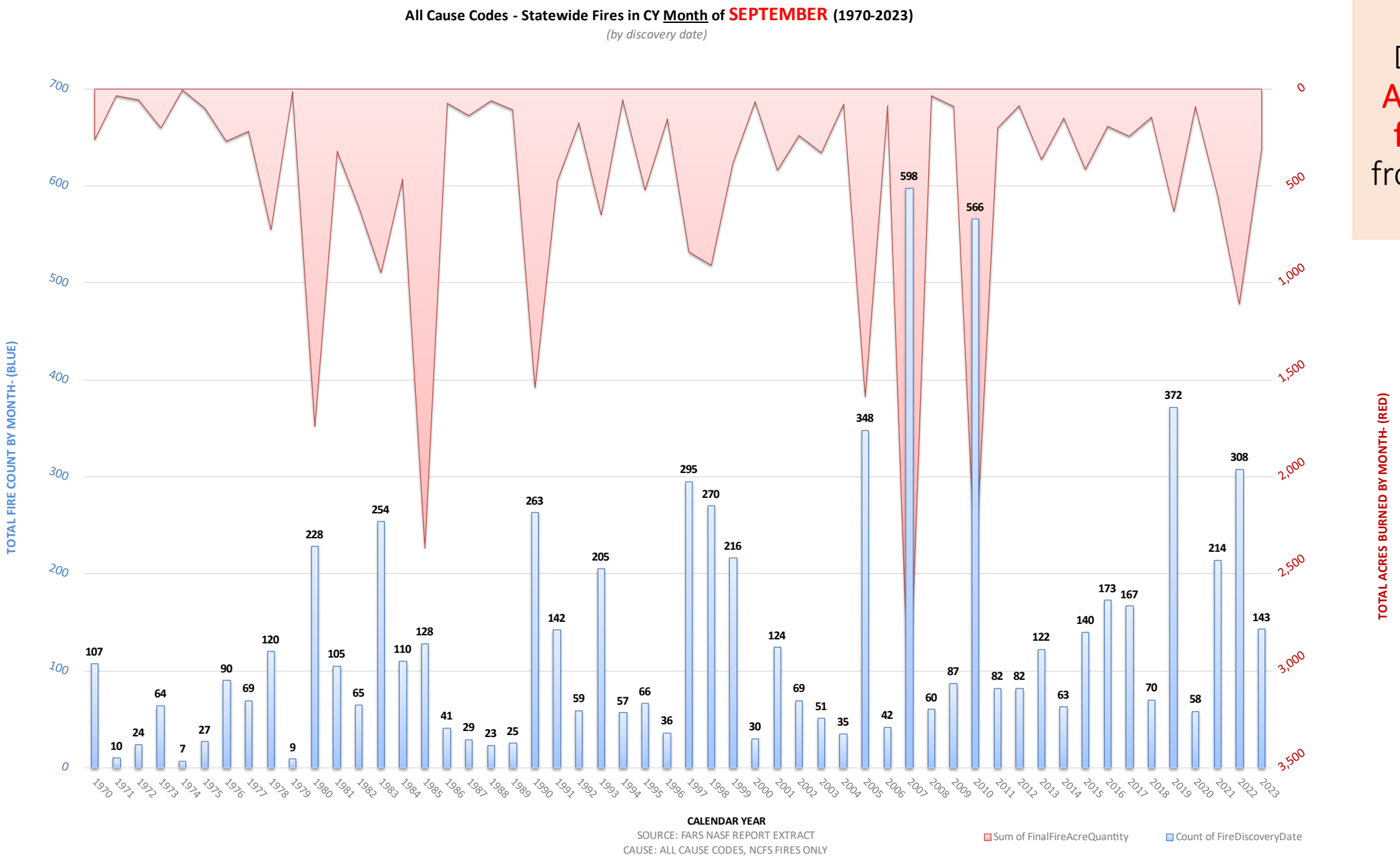
Distribution of
All Fires & Acres
for August
from 1970 - 2023

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

NC Forest Service Fire Locations: August CY 2000 - 2023

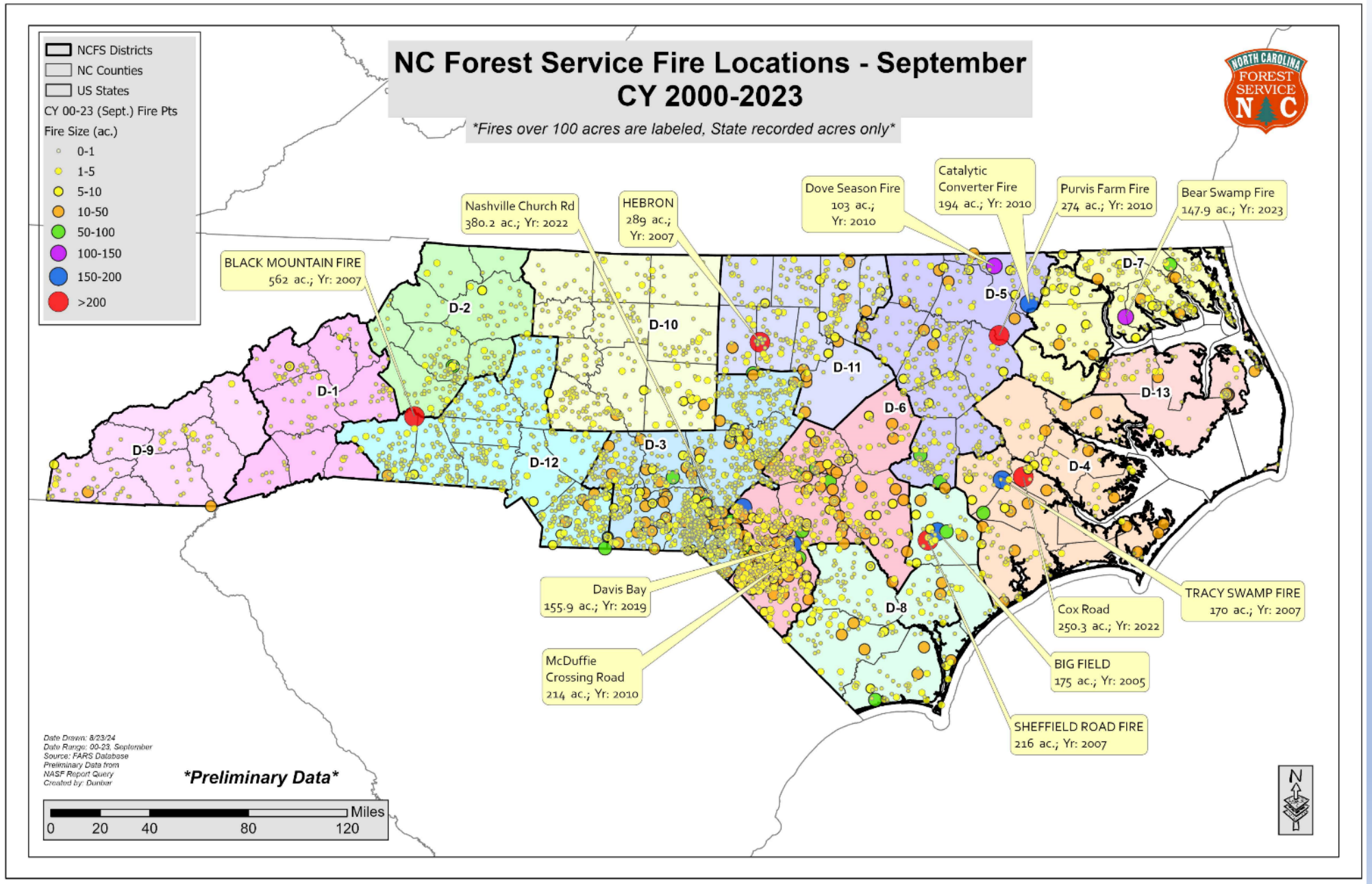
Fires over 100 acres are labeled, State recorded acres only





Distribution of **All Fires & Acres for September** from 1970 - 2023

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

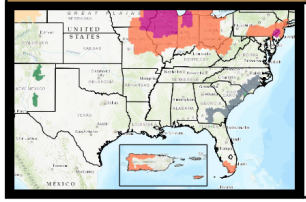


*Recent fires that have not been finalized in FARS aren't displayed on map.

Southern Area Daily Outlook Page:

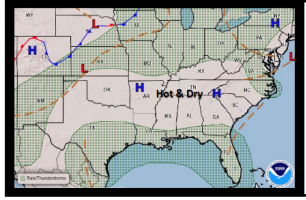
SACC Daily Outlook
Tuesday, August 27, 2024

Watches, Warnings and Advisories



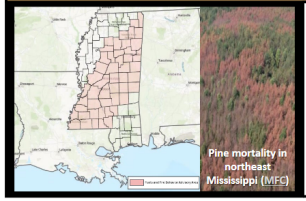
- **Heat Advisories** for parts of KY, FL, PR and the USVI
- **Dense Fog Advisories** this morning in GA, SC and NC
- **Air Quality Alerts** in GA, VA and TN
- **Fuels and Fire Behavior Advisories** in TX and MS
- No Fire Weather Watches or Red Flag Warnings

Today's Weather Outlook



- A high pressure ridge aloft will bring hot and dry conditions to much of the region today
- Thunderstorms will be scattered along the Gulf Coast, with some of this activity shifting into parts of central and northern TX
- A few thunderstorms are possible in eastern NC and VA, while any activity along the far northern tier of the region will be isolated
- Fire danger will increase for the Mississippi and Tennessee Valleys into drier portions of the Appalachians

New Fuels and Fire Behavior Advisory in Mississippi

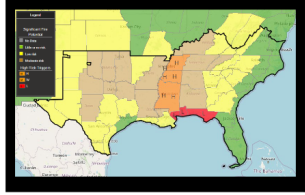


- A new Fuels and Fire Behavior Advisory (link) has been issued for a large portion of Mississippi, extending from southwest parts of the state through the east and northeast
- Pine mortality caused by beetle kill after last year's historic drought is the main driver of abnormal fuels in the fire environment, but recent flash drought onset is making dead and live fuels much more receptive to fire, with increasing resistance to control also noted by the Mississippi Forestry Commission
- Hot and dry conditions the next few days will likely result in increased IA and large fire potential in the advisory area, while scattered thunderstorms will bring new ignitions and a risk for gusty outflow winds, as well

Please contact your local National Weather Service office for spot forecasts and the latest watches and warnings.

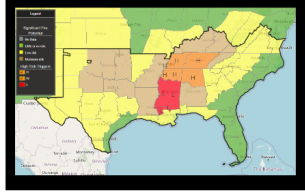
SACC Daily Outlook
Tuesday, August 27, 2024

Significant Fire Potential Outlook Today



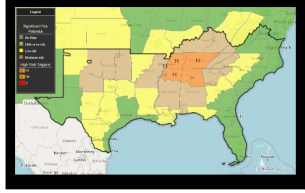
- **HIGH RISK (H):** near-record to record highs at or above 100 degrees combined with RH from 20-30% this afternoon will result in increasing risks for IA and large fires across MS into west TN; winds will generally be light, but instability- and fuel-driven growth of new or existing fires is likely; isolated thunderstorms are possible in far southern MS, which could produce new ignitions and lead to gusty winds
- **HIGH RISK (L):** sea breezes will trigger scattered thunderstorms from the FL panhandle into coastal AL and MS this afternoon; hot and dry conditions will precede this activity; new ignitions and erratic outflow winds may contribute to new large fires and IA
- The rest of the Mississippi Valley into the Appalachians will also see hot and dry conditions, with highs in the 90s to low 100s and RH as low as 18-25% for inland areas
- Isolated thunderstorms could move into the western Hill Country and parts of North TX later this afternoon, resulting in new ignitions; otherwise, seasonably hot and dry conditions in TX and OK will maintain elevated risks in areas of fire-receptive fuels, with wind gusts near 20 mph common this afternoon

Significant Fire Potential Outlook Wednesday



- **HIGH RISK (H):** a further increase in risk is expected across northern MS and AL into much of TN as very hot and abnormally dry conditions continue; RH as low as 18-25% is likely and could be lower locally; record or near-record highs above 100 degrees are expected, but winds will continue to be light except near isolated thunderstorms
- **HIGH RISK (L):** scattered thunderstorms are forecast after otherwise hot and dry conditions from the Florida Parishes in eastern LA through central and southern MS; lightning ignitions will be more likely than normal, especially in areas of pine mortality, while erratic wind gusts up to 45 mph could lead to large fire growth
- Fire danger will continue to increase in the rest of central and northern LA, southern and eastern AR, KY and the Appalachians as hot and dry weather continues
- Slightly hotter conditions are forecast across north TX and OK, resulting in min. RH from 25-30%, while SE to S winds are forecast to gust from 20-25 mph; isolated thunderstorms could contribute to new ignitions, while some holdovers may also emerge

Significant Fire Potential Outlook Thursday

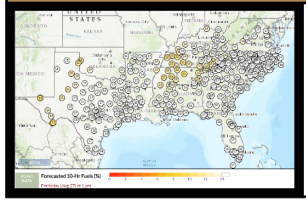


- **HIGH RISK**: triple-digit heat and RH below 30% will continue over north MS and AL into middle and west TN, though thunderstorm chances are forecast to increase, which may warrant a lightning trigger in some of these areas if confidence increases; ERCs are likely to peak above the 97th percentile and may approach all-time record highs in a few locations
- Additional high-risk triggers may be needed into KY, TN and GA depending on fire activity the next few days as hot and dry conditions persist
- Fire danger should decrease a bit over north TX into OK as a significant pattern change begins; RH will be on the increase, but winds are forecast to be stronger, with gusts upwards of 30 mph common in OK and northwest TX; thunderstorms appear to be isolated for the most part but could contribute to new ignitions

National 7-Day Significant Fire Potential Outlook

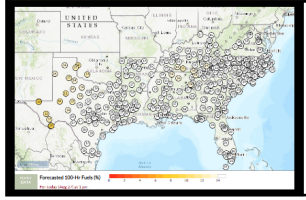
SACC Daily Outlook
Tuesday, August 27, 2024

10-Hour Fuels



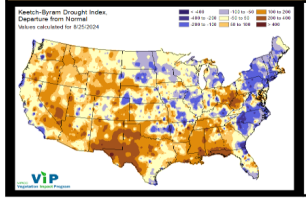
- 10-hour dead fuel moisture is forecast to reach record lows for this time of year across parts of north MS and AL into middle and west TN today, with similar conditions continuing into tomorrow and Thursday before increasing moisture arrives
- Look for increasing 10FM for most of the Plains states, especially late this week into the weekend
- The Appalachians will see a sharp decrease in 10FM the next few days, with increases this weekend or early next week tied to increasing rainfall chances and higher humidity

100-Hour Fuels



- 100-hour dead fuel moisture is also expected to be at near record low values for this time of year the next few days over the Tenn. Valley into MS and west TN, perhaps in adjacent areas briefly
- 100-hour dead fuel moisture will gradually increase in the Plains later this week, with more substantial increases likely this weekend into early next week as rainfall becomes more widespread and RH increases under cloud cover
- Look for increasing 100FM in most of the rest of the region this weekend into early next week, though MS, AL and GA will likely be slowest to improve

Keetch-Byram Drought Index Anomalies

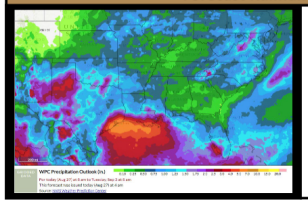


- Well above normal KBDIs are increasingly common in the Southern Area due to a hot and dry August
- Values are highest relative to normal across the Gulf Coast into MS, AL and TN, in addition to most of West TX, extending into portions of central and northern TX
- KBDIs will likely increase substantially the rest of the week across the Mississippi Valley, with parts of north MS and AL into TN and southwest KY potentially setting all-time record high values
- KBDIs in TX and OK will largely decrease by this weekend into early next week if expected rainfall materializes, then look for at least scattered improvement in the Mississippi Valley

North Carolina State University Fire Weather Intelligence Portal

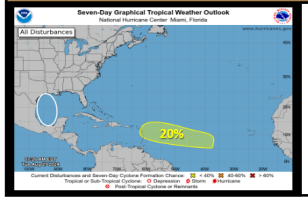
SACC Daily Outlook
Tuesday, August 27, 2024

Forecast Rainfall the Next Week



- Expected rainfall for the week ahead is depicted, but confidence is relatively low for most of the region due to uncertainties with specifics in the weather pattern Sunday into next week
- The highest confidence in heavy rainfall will be over coastal LA and TX, where amounts in excess of 5" will be likely; rainfall amounts here could increase further if a tropical low pressure system forms near the coast over the weekend, which is increasingly supported by model guidance
- Elsewhere, a backdoor front will bring increasing rain to VA and the Appalachians late Thursday into the weekend, while a slow-moving front is forecast to bring increasing rain to the Plains Friday into early next week; rainfall should be highest across the High Plains
- Rainfall totals are subject to change from the Mississippi Valley into the Southeast, which is where confidence is the lowest by early next week

NHC 7-Day Tropical Outlook



- The NHC is now monitoring the complex tropical wave over the Atlantic's main development region, which continues to have widespread record warm SSTs
- The main uncertainty here is tied to where and when low pressure develops, which will have implications on the timing of potential impacts to the Caribbean islands next week
- An increasing subset of model guidance indicates conditions that are favorable for rapid intensification, but uncertainty is high in details; the spread in models suggest impacts are possible to the USVI and PR anywhere from Monday night to Thursday night next week
- Models are inconsistent on the potential for low pressure to form over the western Gulf of Mexico this weekend or early next week, but conditions should be monitored closely, especially since soils will likely become saturated along the TX and LA coasts by the weekend

Please contact your local National Weather Service office for spot forecasts and the latest watches and warnings.

Product is generally updated weekdays unless increased activity & PL in the Geographic Area (8/27 Outlook shown)

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

July & Early August Rains + Recent Cool/Dry Spell Transition to Warmer Conditions

Drought conditions have improved significantly for eastern portions of the state after repeated rounds of soaking rain in July and TS Debby in early August. The cooler than normal trend has also been in place over NC – but this has shifted back to warmer than normal along with increasing evaporative demands & dead fuel drying, especially in our mountain counties.

Live fuels in much of the state rapidly rebounded, especially roadside/yard herbaceous species. Cooler temperatures, improvements in duff moisture and generalized "regreening" of herbaceous species have helped reduce difficulty of control and debris burning escapes.

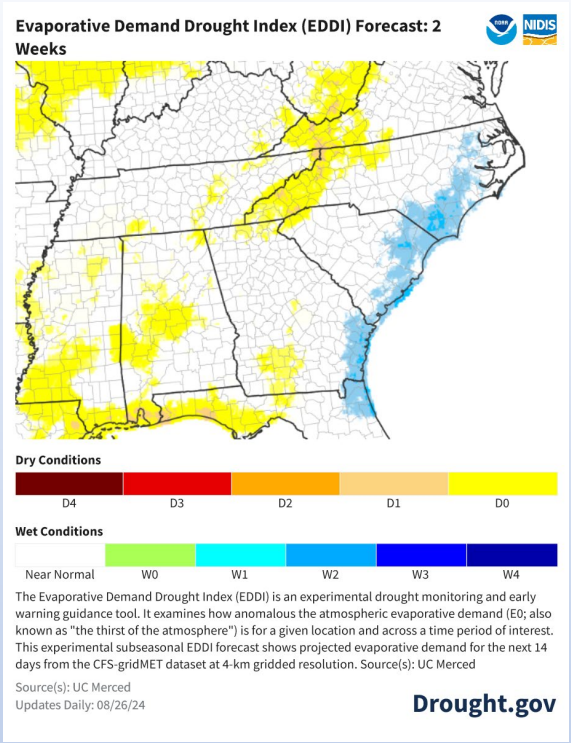
However, continued lack of widespread rainfall over the past couple weeks along with the drier air & heat will again impact fuel receptivity. If significant rainfall doesn't occur – expect a continued uptick in IA as grasses and dead fuels respond further, see next slide for current FDRA averages. Especially areas still seeing significant cumulative rainfall deficits (SW Mtns).

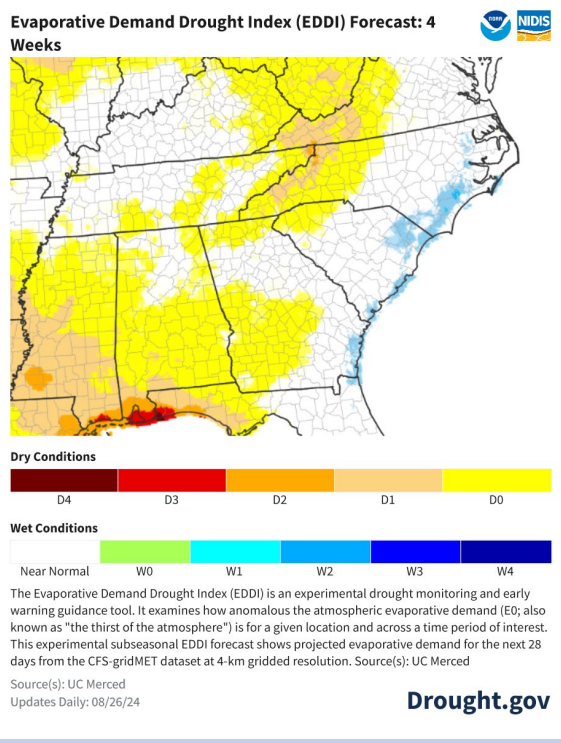
Daily duration of sunlight continues to slowly decrease (along with more indirect sun angle) as we depart summer. Currently we are around 13 hours of daily sun, similar to mid-April. Accumulated drought stress may impact more sensitive species earlier than normal as we move into Fall.

EDDI Maps - The EDDI maps at the top right illustrate modeled evaporative demand at the two-week and four-week level. They represent enhanced drying potential for the western piedmont and mountains, with near normal conditions east.

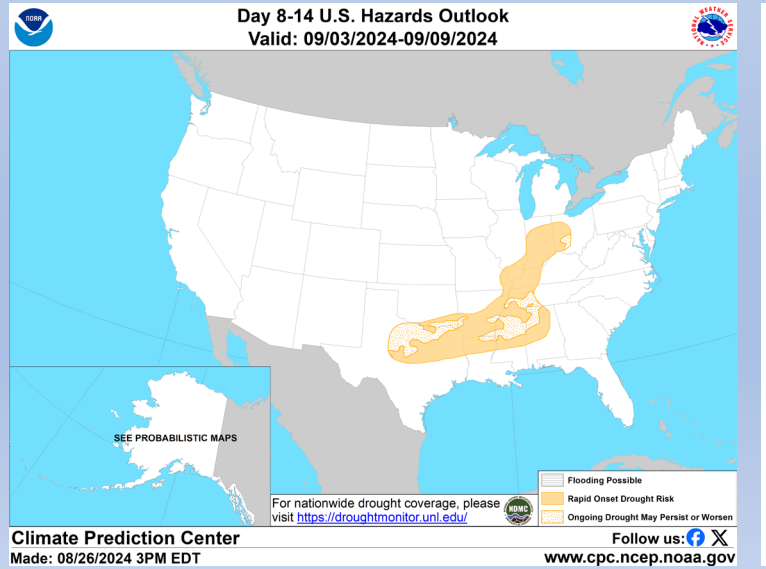
Regional Rapid Onset Drought Risk - The CPC has outlined a portion of the Southeast US as being at risk for rapid onset drought ("flash drought"). Many of these areas are already seeing an uptick in fire activity. See Fuels and Fire Behavior Advisories for portions of Texas here and Mississippi here.

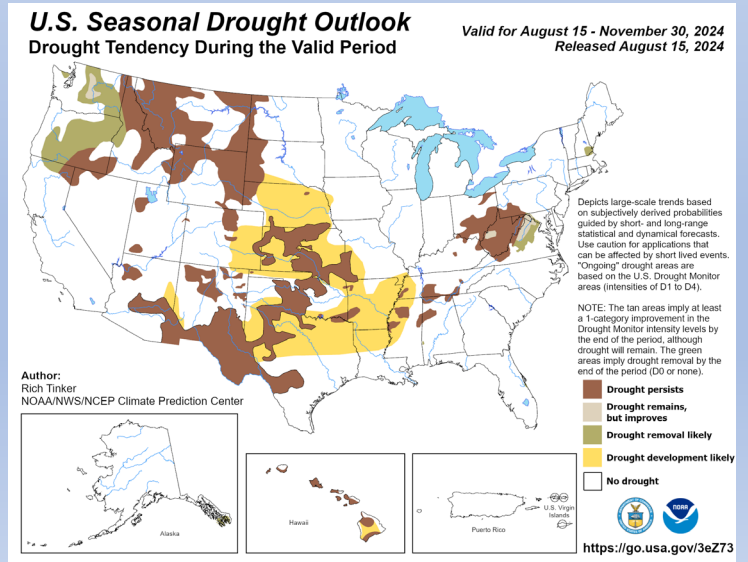
US Seasonal Drought Outlook - released on 8/15/24, shown at bottom right. See detailed state/regional discussions here. *All of this is dependent upon any potential tropical impacts that may/may not occur.*





https://www.drought.gov/data-maps-tools/evaporative-demand-drought-index-eddi-subseasonal-forecasts





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
  percentiles are based on SIG station averages from analysis of "All Days" for entire calendar year range through 2021

- Herb & Woody Fuel Moisture Estimates derived from SIG Station Averages – based on Station GSI Settings within WIMS, not live fuel moisture sampling. Actual green-up is variable across the landscape.

Daily WIMS Forecast Observations and NFDRS Estimates are also available

Averaged by FDRA SIG Group
This is available on the FWIP at: https://products.climate.ncsu.edu/fwip/nfdrs.php?data=fc

8/27/24 Observations

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	2024-08-27	43.33 68.6%	28.03 77.4%	7.23 81.7%	12.83 63.4%	563.33	10.40 11.3%	15.40 20.8%	16.60 17.0%	20.57 63.0%	197.17	164.33	84.3°F	45.3%	SE 1.7 mph	0.00 in.	0.0
Central Mountains	3	2024-08-27	24.30 39.8%	16.47 46.2%	3.33 51.9%	5.80 41.3%	426.33	12.75 46.9%	18.82 59.7%	17.03 19.3%	20.54 68.1%	250.00	200.00	86.7°F	44.0%	S 2.3 mph	0.00 in.	0.0
Northern Highlands	2	2024-08-27	23.05 40.4%	14.25 47.0%	2.65 58.1%	5.85 38.6%	275.00	13.70 46.6%	17.99 49.9%	17.11 21.0%	21.33 66.8%	250.00	200.00	84.5°F	48.0%	SSE 3.0 mph	0.00 in.	0.0
Blue Ridge Escarpment	3	2024-08-27	40.17 56.7%	28.70 67.6%	6.27 61.4%	10.27 49.3%	389.33	10.61 37.1%	15.91 38.9%	18.03 34.2%	18.40 20.5%	188.03	157.67	91.3°F	43.3%	ESE 2.3 mph	0.00 in.	0.0
Western Piedmont	3	2024-08-27	18.53 18.0%	17.87 32.4%	2.83 32.4%	2.93 11.3%	268.33	11.92 55.3%	16.04 50.3%	15.98 17.5%	20.37 64.0%	248.13	197.33	93.3°F	43.7%	SW 2.0 mph	0.00 in.	0.0
Sandhills	3	2024-08-27	29.13 31.5%	34.60 40.6%	9.67 60.2%	4.20 32.9%	285.00	10.29 32.4%	18.98 68.3%	17.68 40.5%	20.89 77.5%	233.03	186.33	93.3°F	37.3%	WNW 3.7 mph	0.00 in.	0.0
Eastern Piedmont	4	2024-08-27	23.45 13.8%	15.78 20.1%	3.20 25.6%	5.58 10.0%	275.75	12.87 59.9%	18.12 61.5%	16.99 22.6%	20.60 78.3%	233.20	189.50	89.8°F	53.5%	WSW 4.0 mph	0.00 in.	0.0
Southern Coastal	7	2024-08-27	16.84 11.8%	14.71 21.0%	1.89 22.3%	2.94 7.2%	309.57	13.89 63.2%	17.46 49.3%	18.03 30.4%	21.17 64.1%	250.00	199.29	92.6°F	49.6%	SSE 2.0 mph	0.00 in.	0.0
Northern Coastal	4	2024-08-27	14.73 12.7%	15.58 23.2%	2.00 23.8%	2.03 8.1%	241.75	12.89 58.4%	17.56 63.0%	17.12 21.9%	20.69 70.2%	242.65	193.75	92.5°F	50.0%	WSW 3.5 mph	0.00 in.	0.0

Fuel Model X is composed of 1-hr, 10-hr and live fuels (when dormant act as dead fuels) – hence responsiveness to rapid drying. All FDRAs within NC (except Sandhills) utilize FM-X at the present time.

Important notes for next slide group:

A. Current ERC, KBDI, GSI, 10-Hr, 100-Hr & 1000-Hr Graphics:

- These are extracts from FF+ using daily observation data downloaded from WIMS.

B. 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.

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:

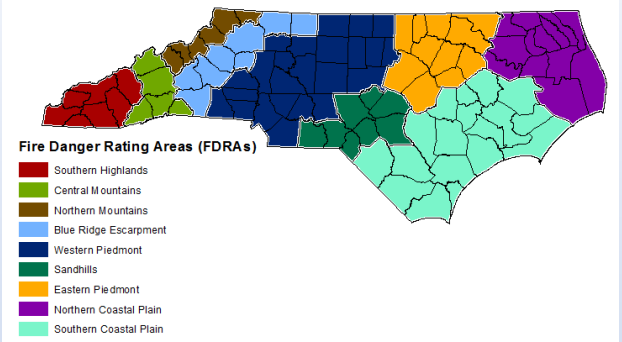
- Low to Moderate (0 to 74th percentile); shown in blue-green
- High (75th to 89th percentile); shown in yellow
- Very High to Extreme (90th+ percentile); shown in red and labeled as Critical

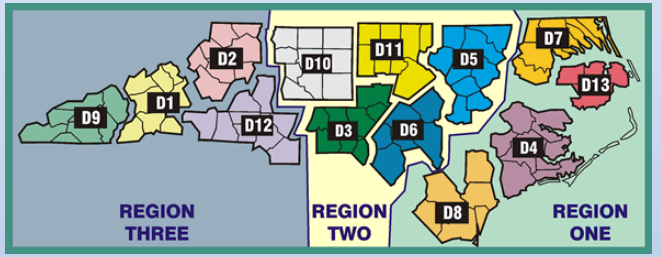
Dead fuel moisture forecast values are grouped into three categories based on historical percentiles, assessed using the FF+ All Days filter through 2021:

- 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.



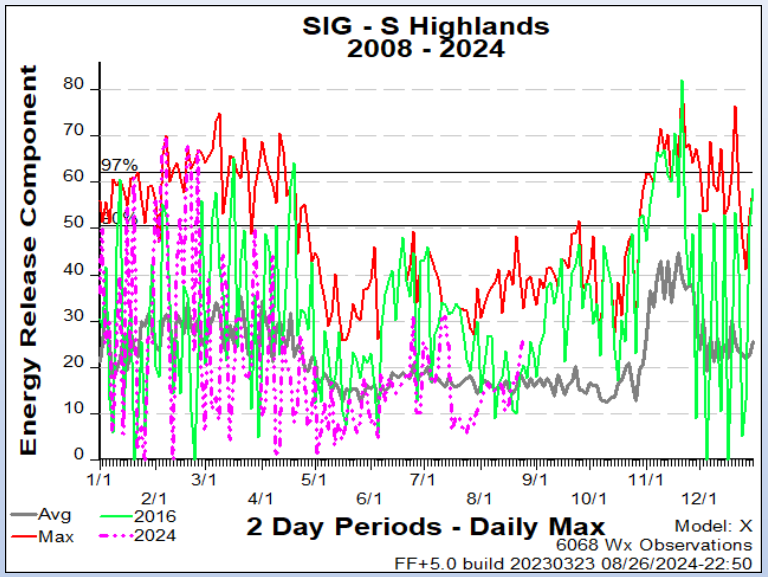


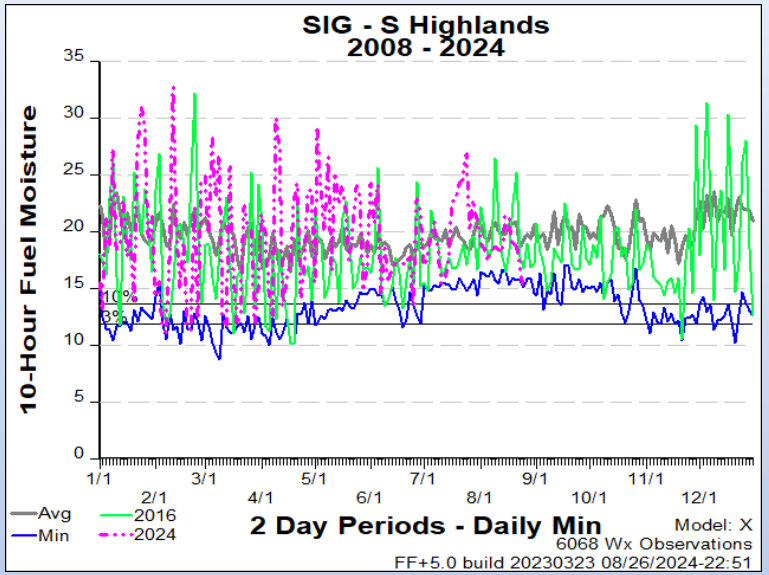
To reduce duplication & increase situational awareness, slides 11-32 are organized by FDRA in this order:

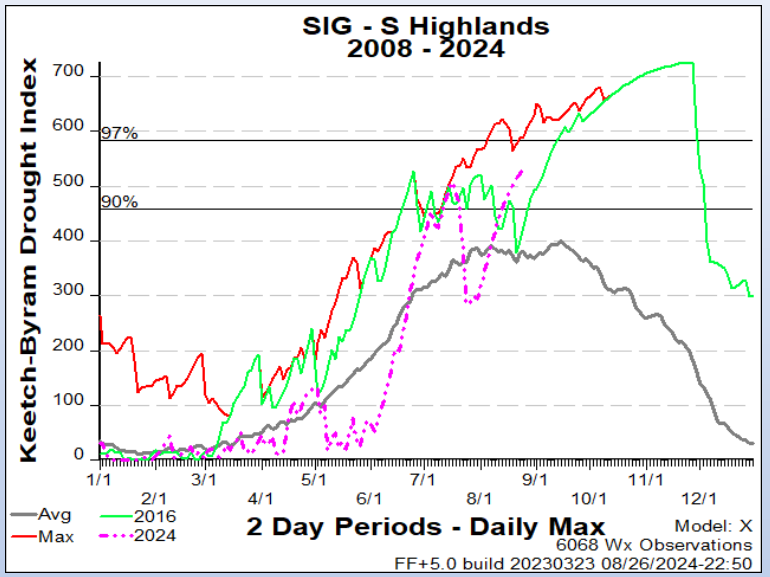
**(R3 = Region 3, R2 = Region 2, R1 = Region 1)*

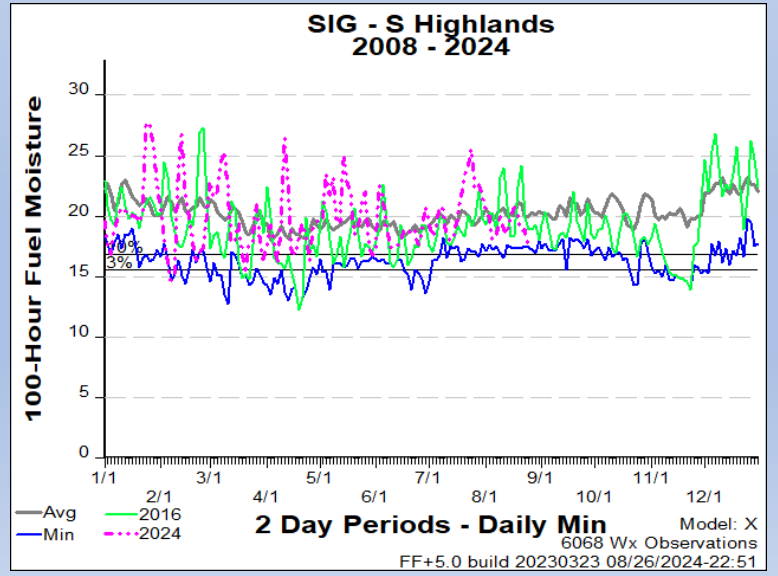
- Southern Highlands (R3)
- Central Mountains (R3)
- Northern Highlands (R3)
- Blue Ridge Escarpment (R2 & R3)
- Western Piedmont (R2 & R3)
- Eastern Piedmont (R2)
- Sandhills (R2)
- North Coast (R1)
- South Coast (R1 & R2)

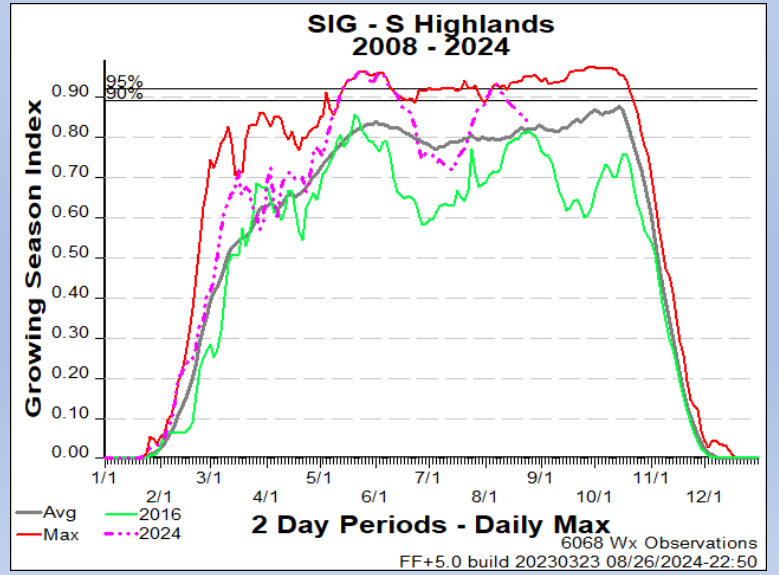
FDRA – Southern Highlands

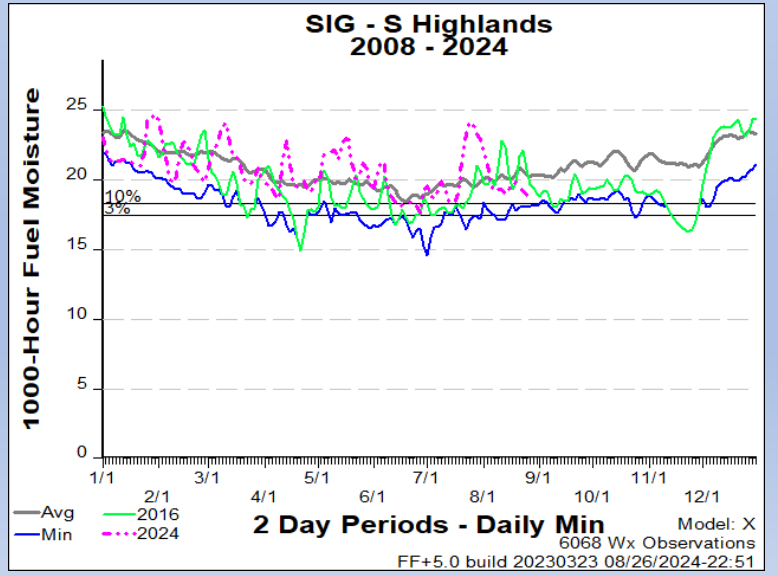






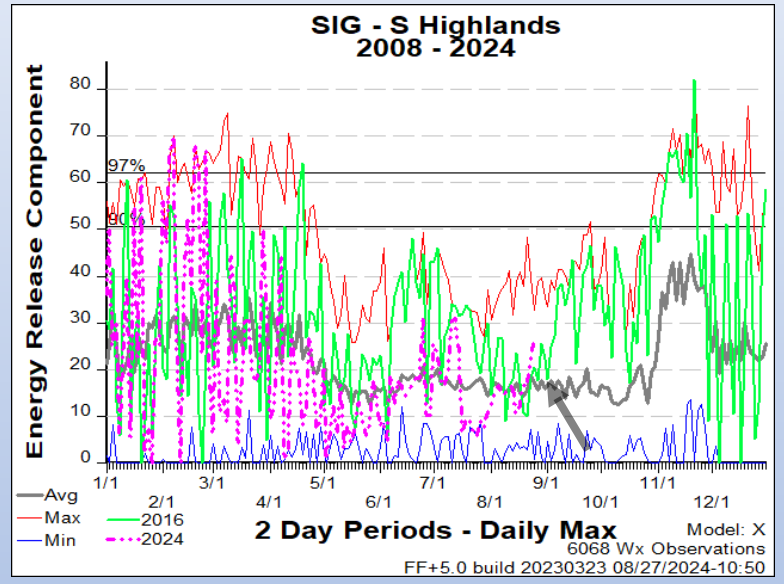




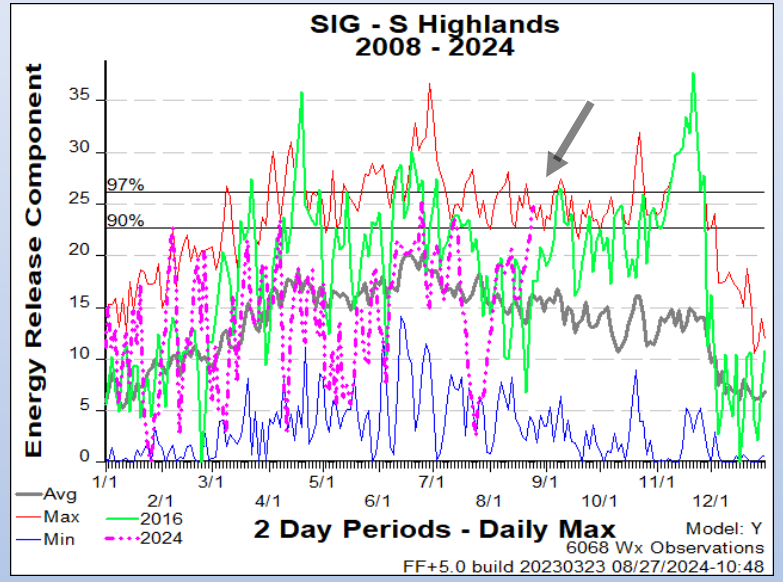


FDRA – Southern Highlands

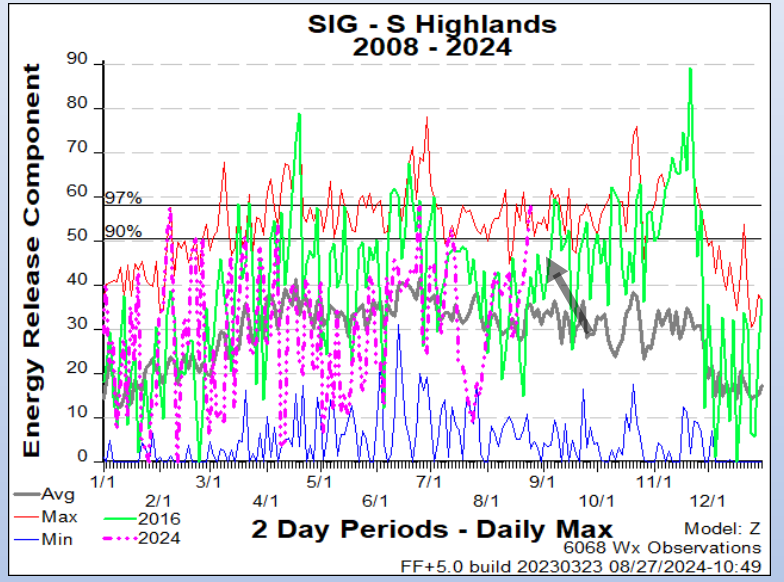
ERC-X



ERC-Y



ERC-Z



Comparison of ERC by NFDRS Fuel Model

X: 1's, 10's, Live Component (GSI driven); + Drought Loading

Y: Heavily weighted on 1000's, less on smaller dead; No live; + Drought Loading

Z: Near even distribution between the four dead size classes of 1's, 10's, 100's, 1000's; No live; + Drought Loading

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Average, Max, Min, CY Year 2016 are displayed along with Year-to-Date 2024

Weekly Outlook

Southern Highlands 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	TUE 27-Aug	WED 28-Aug	THU 29-Aug	FRI 30-Aug	SAT 31-Aug	SUN 01-Sep	MON 02-Sep
Avg. Max. Temp. (°F)	86	88	87	84	83	81	79
Avg. Min. Humidity (%)	42	41	47	58	66	67	67
Avg. 20' Wind Speed (mph)	1	1	1	1	1	1	2
Avg. Wind Direction*	SSW	SW	S	ESE	SSE	SSW	SW
Avg. Probability of Precip. (%)	6	10	28	53	61	56	47
Days Since a Wetting Rain**	16.3	17.3	14.0	15.0			
Forecast ERC (Fuel Model X)	26.0	24.5	23.4	22.6	17.2	15.6	15.2
Forecast BI (Fuel Model X)	39.4	36.6	37.3	39.7	31.2	28.2	27.8
Forecast IC (Fuel Model X)	6.5	5.6	5.4	4.9	2.8	2.2	2.1
Forecast 100-Hr. FMC	16.0	16.0	16.5	16.9	17.9	18.6	19.0
Forecast 1000-Hr. FMC	20.3	20.0	19.7	19.5	19.4	19.4	19.4
KBDI	555.0						

Data 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 3 stations in this FDRA:

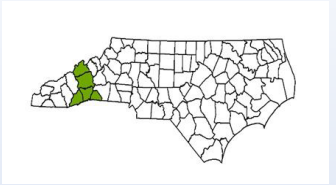
- **Tusquitee** (315602)
- **Locust Gap** (315802)
- **Highlands** (315803)

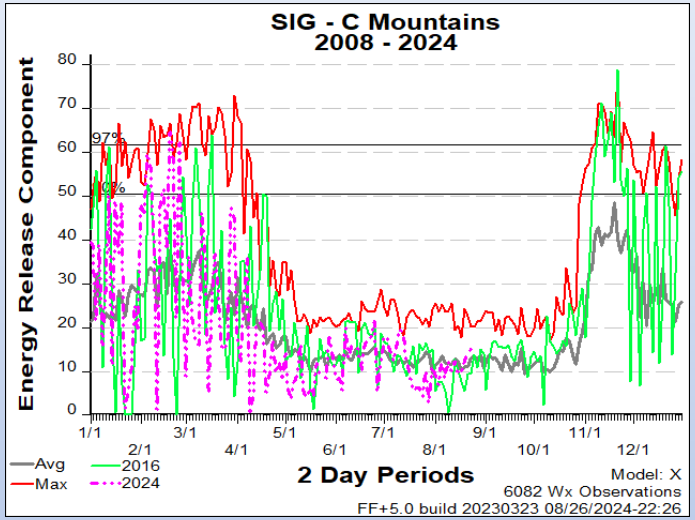
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 55°F	Greater than 55°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 5 mph	Between 5 mph and 7 mph	Greater than 7 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 40	Between 40 and 52	Greater than 52
Burning Index	Less than 95	Between 95 and 118	Greater than 118
Ignition Component	Less than 9	Between 9 and 14	Greater than 14
100-Hour Fuel Moisture	Greater than 18%	Between 17% and 18%	Less than 17%
1000-Hour Fuel Moisture	Greater than 19%	Between 18% and 19%	Less than 18%
KBDI	Less than 345	Between 345 and 479	Greater than 479

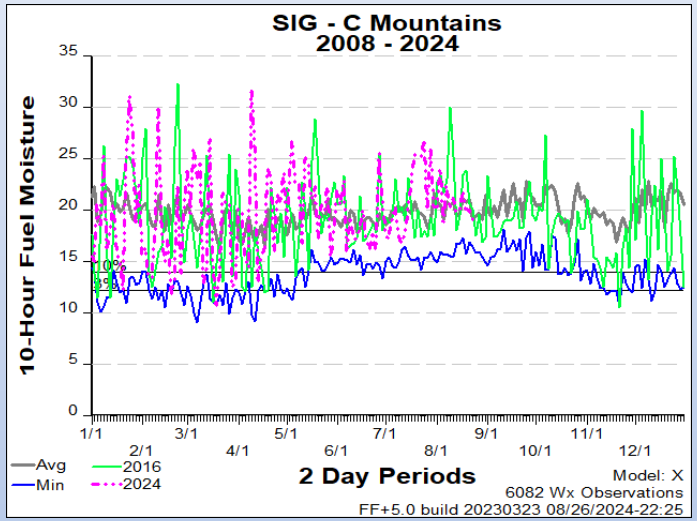
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

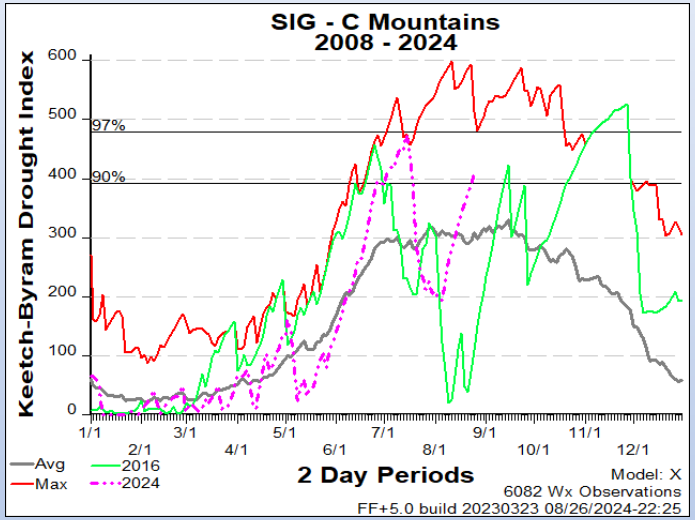
0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

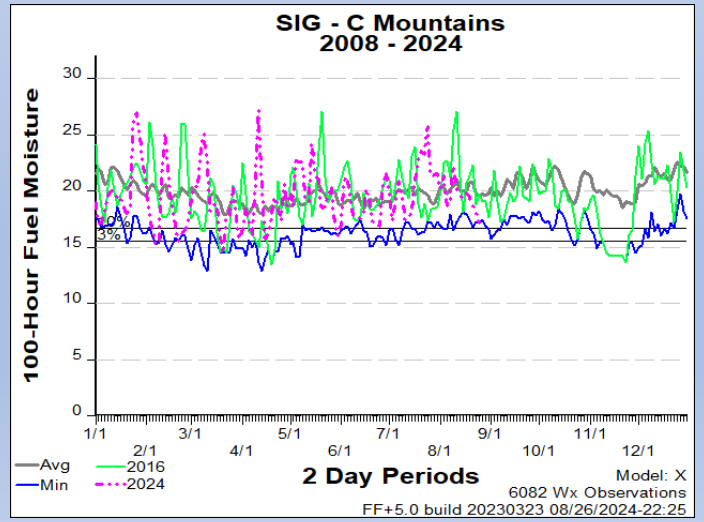
FDRA – Central Mountains

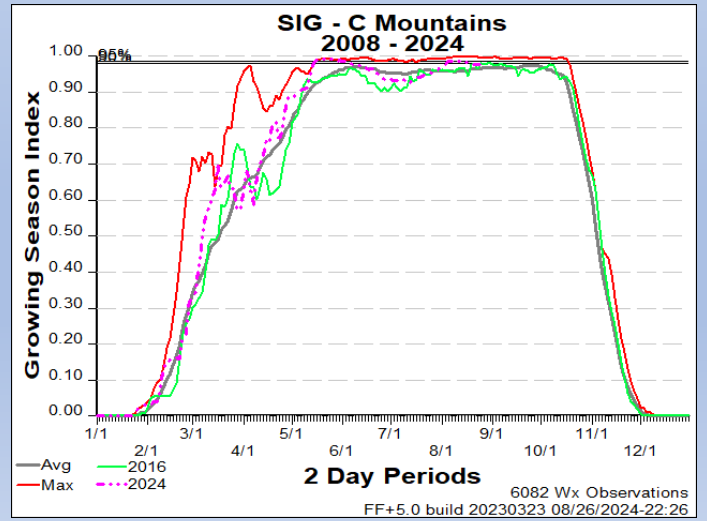


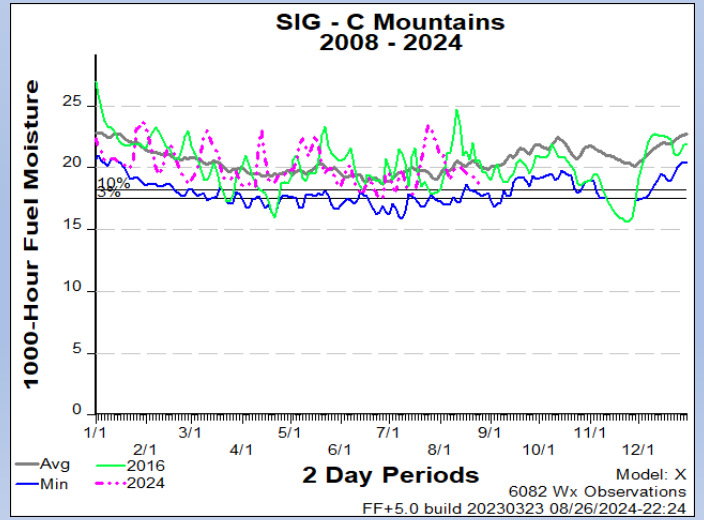




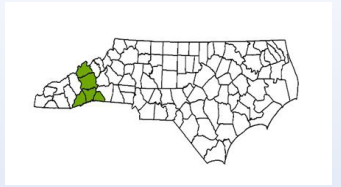




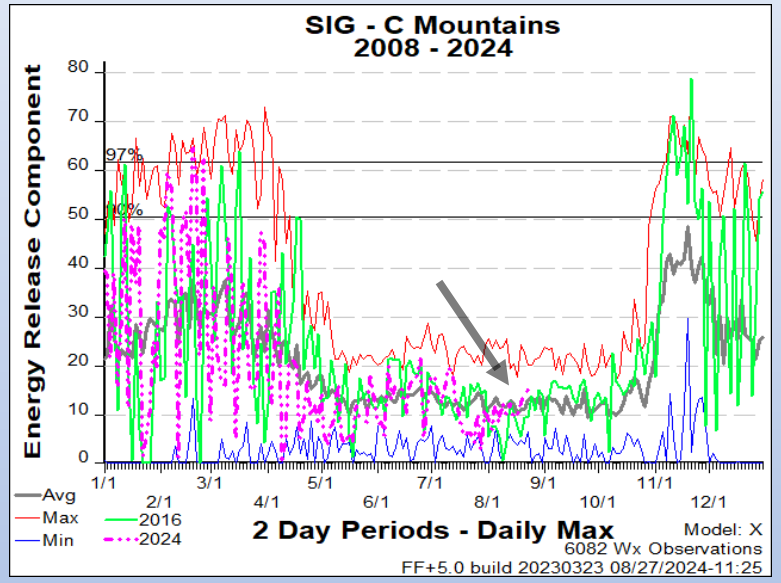




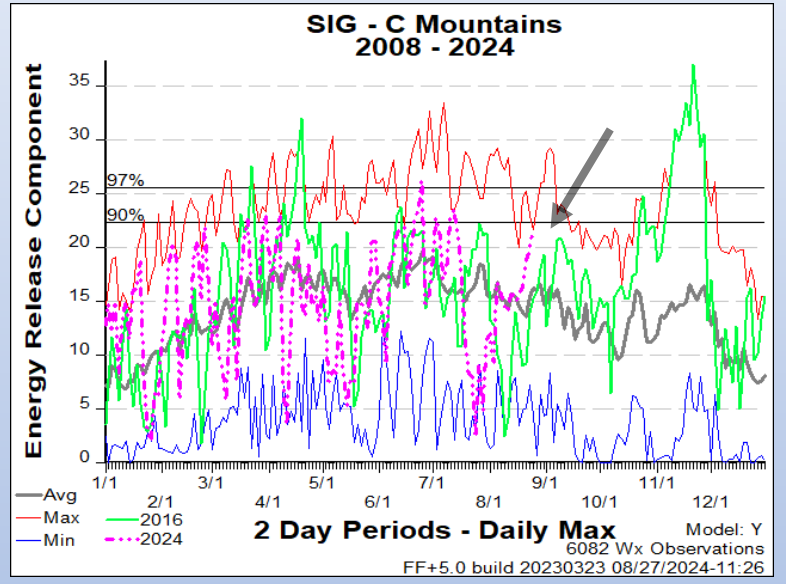
FDRA – Central Mountains



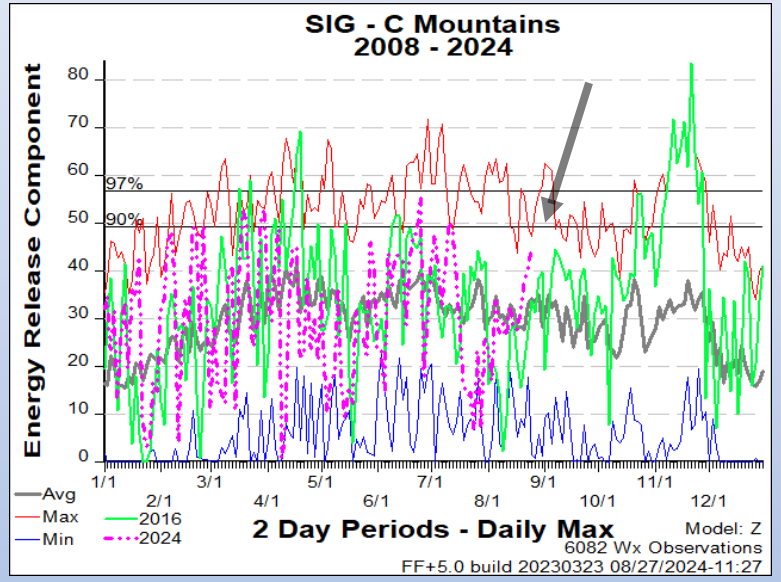
ERC-X



ERC-Y



ERC-Z



Comparison of ERC by NFDRS Fuel Model

X: 1's, 10's, Live Component (GSI driven); + Drought Loading

Y: Heavily weighted on 1000's, less on smaller dead; No live; + Drought Loading

Z: Near even distribution between the four dead size classes of 1's, 10's, 100's, 1000's; No live; + Drought Loading

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Average, Max, Min, CY Year 2016 are displayed along with Year-to-Date 2024

Weekly Outlook

Central Mountains 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	TUE 27-Aug	WED 28-Aug	THU 29-Aug	FRI 30-Aug	SAT 31-Aug	SUN 01-Sep	MON 02-Sep
Avg. Max. Temp. (°F)	88	91	91	88	86	83	82
Avg. Min. Humidity (%)	43	42	45	56	66	66	64
Avg. 20' Wind Speed (mph)	2	2	2	2	2	2	2
Avg. Wind Direction*	SSW	WSW	SW	SSW	SW	W	WNW
Avg. Probability of Precip. (%)	10	9	31	62	70	61	48
Days Since a Wetting Rain**	7.3	8.3	4.7	5.7			
Forecast ERC (Fuel Model X)	16.2	19.0	17.7	15.8	13.4	11.8	11.8
Forecast BI (Fuel Model X)	21.8	22.9	22.0	21.7	19.9	18.0	19.0
Forecast IC (Fuel Model X)	3.0	3.9	3.7	2.9	2.0	1.6	1.5
Forecast 100-Hr. FMC	16.4	16.6	16.8	17.1	17.4	18.7	18.8
Forecast 1000-Hr. FMC	20.3	20.0	19.8	19.6	19.4	19.5	19.5
KBDI	414.3						

0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

Data 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

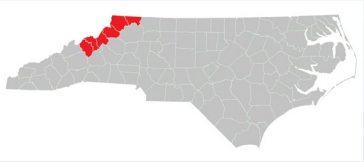
Values in the table above are averages from 3 stations in this FDRA:

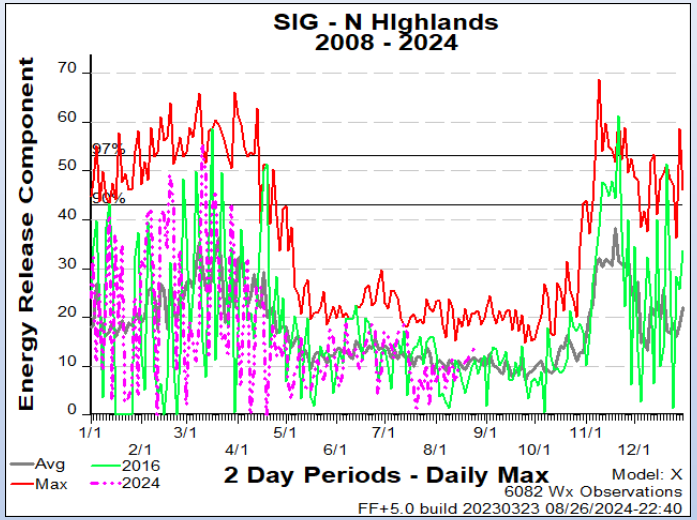
- **7 Mile Ridge** (313302)
- **Davidson River** (316001)
- **Mtn Horticultural Crops Res Stn** (316141)

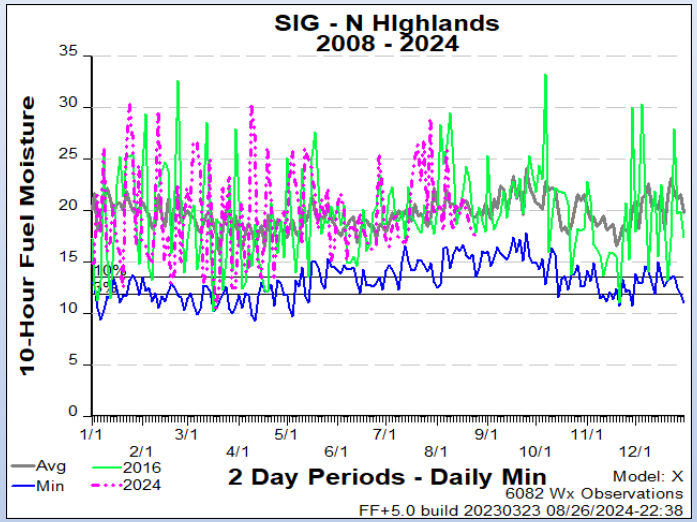
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 5 mph	Between 5 mph and 10 mph	Greater than 10 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 33	Between 33 and 50	Greater than 50
Burning Index	Less than 78	Between 78 and 106	Greater than 106
Ignition Component	Less than 6	Between 6 and 11	Greater than 11
100-Hour Fuel Moisture	Greater than 19%	Between 17% and 19%	Less than 17%
1000-Hour Fuel Moisture	Greater than 20%	Between 19% and 20%	Less than 19%
KBDI	Less than 319	Between 319 and 417	Greater than 417

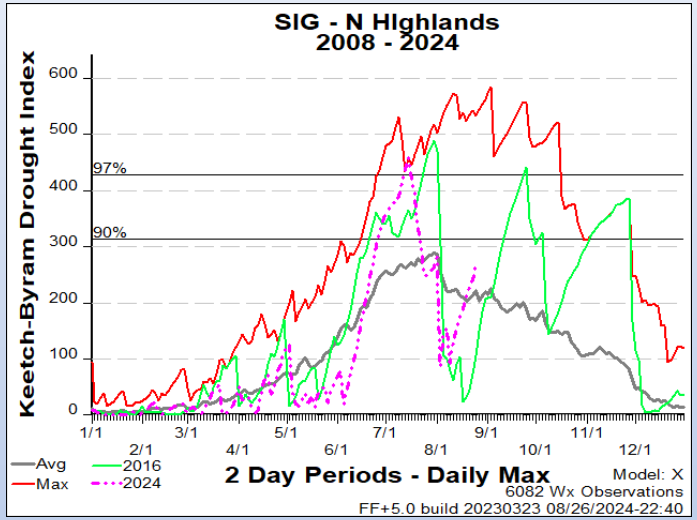
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

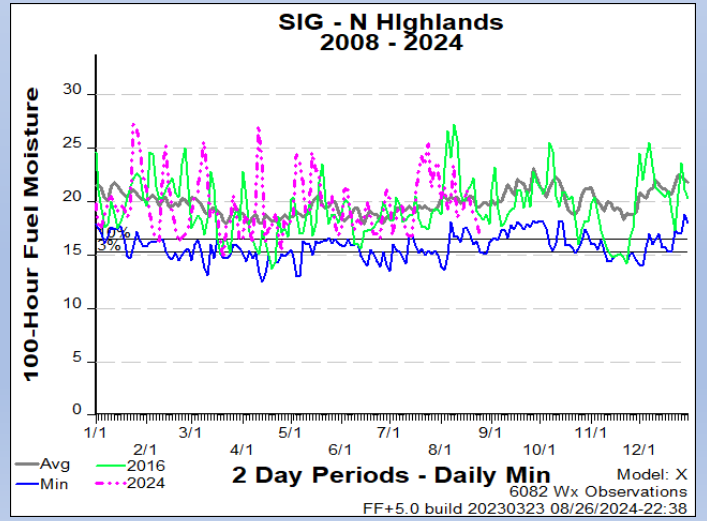
FDRA – Northern Highlands

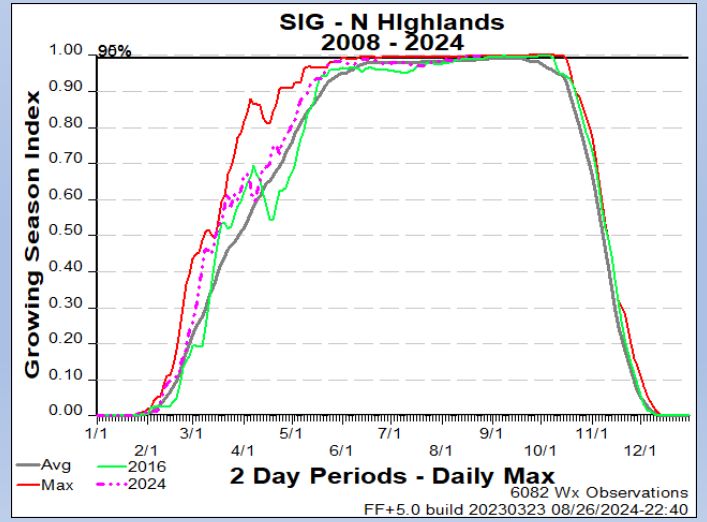


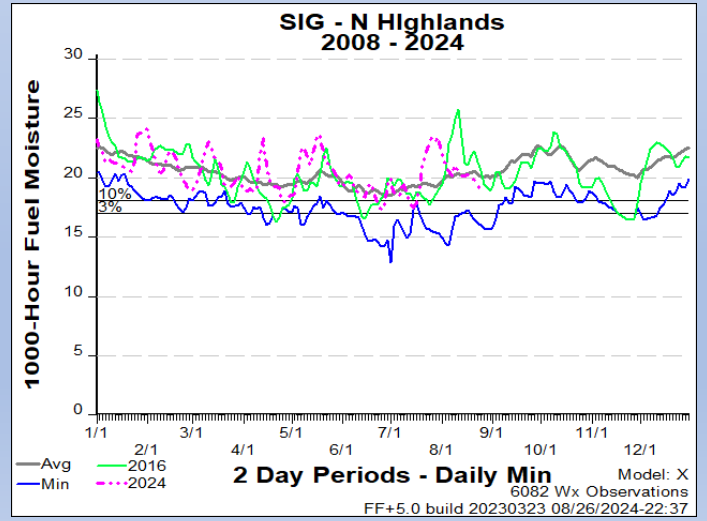




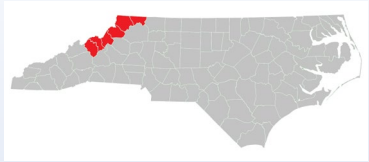




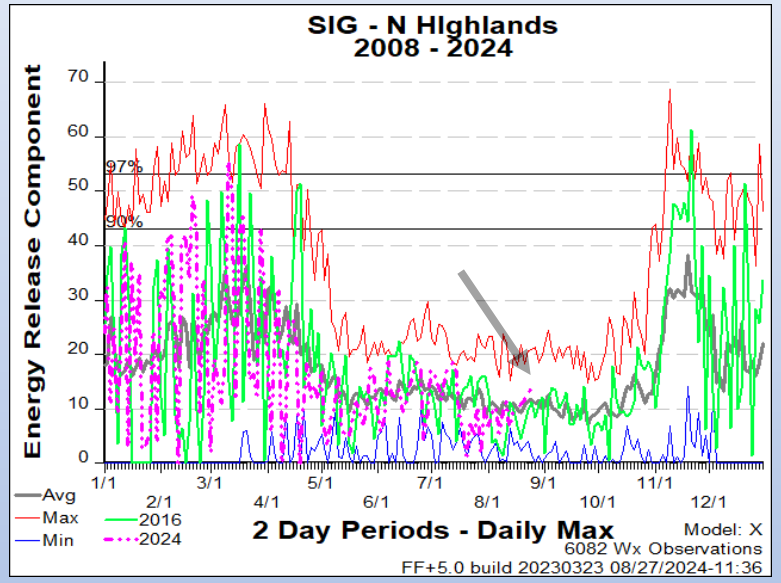




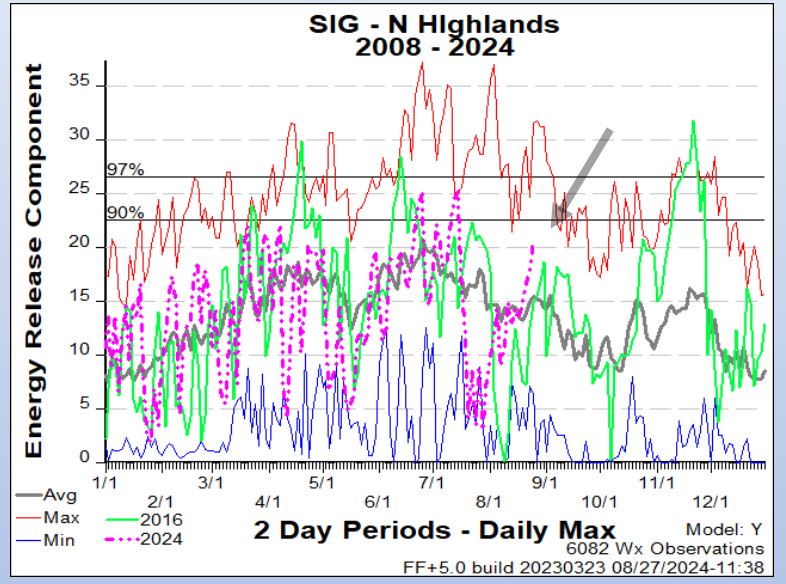
FDRA – Northern Highlands



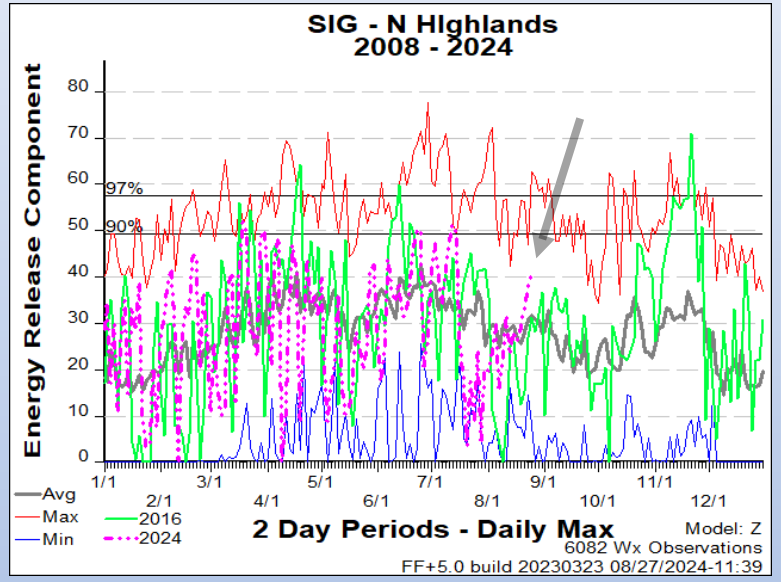
ERC-X



ERC-Y



ERC-Z



Comparison of ERC by NFDRS Fuel Model

X: 1's, 10's, Live Component (GSI driven); + Drought Loading

Y: Heavily weighted on 1000's, less on smaller dead; No live; + Drought Loading

Z: Near even distribution between the four dead size classes of 1's, 10's, 100's, 1000's; No live; + Drought Loading

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Average, Max, Min, CY Year 2016 are displayed along with Year-to-Date 2024

Weekly Outlook

Northern Highlands 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	TUE 27-Aug	WED 28-Aug	THU 29-Aug	FRI 30-Aug	SAT 31-Aug	SUN 01-Sep	MON 02-Sep
Avg. Max. Temp. (°F)	84	86	86	82	80	78	77
Avg. Min. Humidity (%)	53	48	58	69	72	68	61
Avg. 20' Wind Speed (mph)	3	3	2	3	2	3	4
Avg. Wind Direction*	SSW	W	SSW	S	WSW	WNW	NW
Avg. Probability of Precip. (%)	16	9	30	69	73	48	44
Days Since a Wetting Rain**	0.7	1.7	2.0	3.0			
Forecast ERC (Fuel Model X)	14.0	17.2	16.6	12.8	10.6	9.1	10.5
Forecast BI (Fuel Model X)	21.8	24.0	23.5	21.1	18.4	17.3	19.0
Forecast IC (Fuel Model X)	2.9	3.9	3.7	2.4	1.5	1.2	1.5
Forecast 100-Hr. FMC	16.9	17.3	17.3	17.5	17.9	20.0	19.8
Forecast 1000-Hr. FMC	21.2	20.9	20.7	20.5	20.4	20.4	20.4
KBDI	260.0						

Data 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 3 stations in this FDRA:

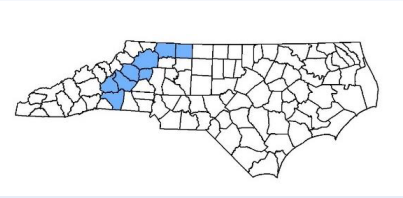
- **Laurel Springs** (310101)
- **Upper Mountain Research Stn** (310141)
- **Busick** (313402)

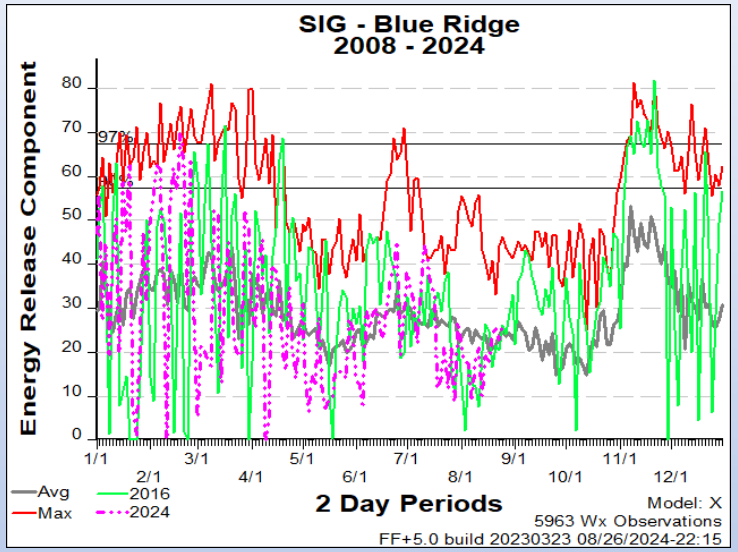
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 58°F	Greater than 58°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 2 mph	Between 2 mph and 5 mph	Greater than 5 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 26	Between 26 and 46	Greater than 46
Burning Index	Less than 67	Between 67 and 108	Greater than 108
Ignition Component	Less than 5	Between 5 and 9	Greater than 9
100-Hour Fuel Moisture	Greater than 18%	Between 17% and 18%	Less than 17%
1000-Hour Fuel Moisture	Greater than 20%	Between 19% and 20%	Less than 19%
KBDI	Less than 192	Between 192 and 330	Greater than 330

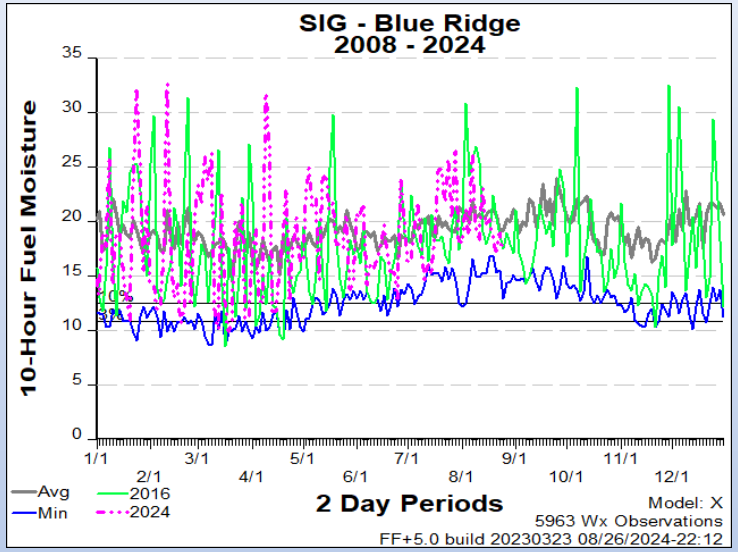
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

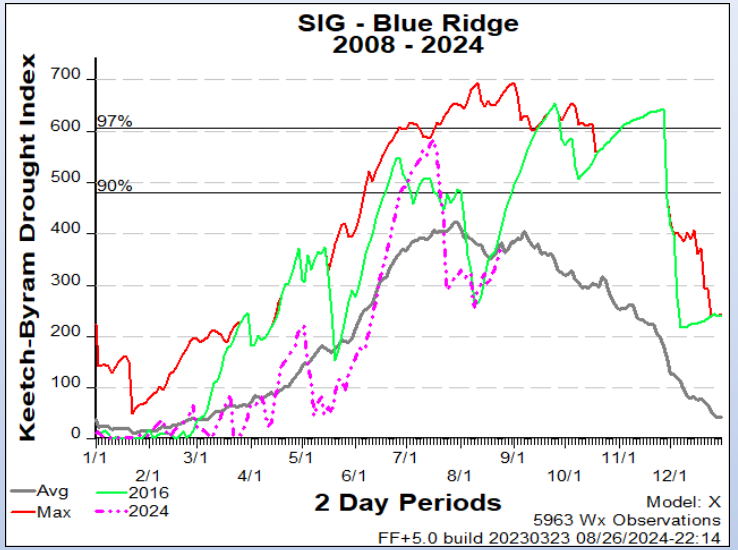
0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

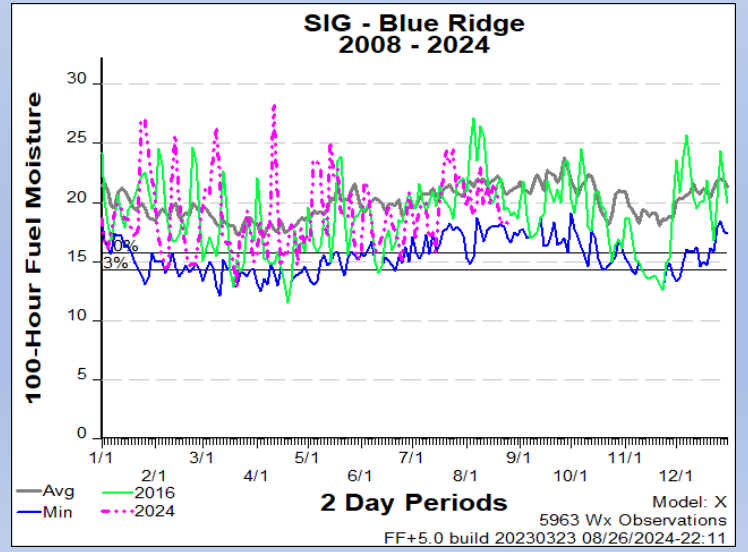
FDRA – Blue Ridge Escarpment

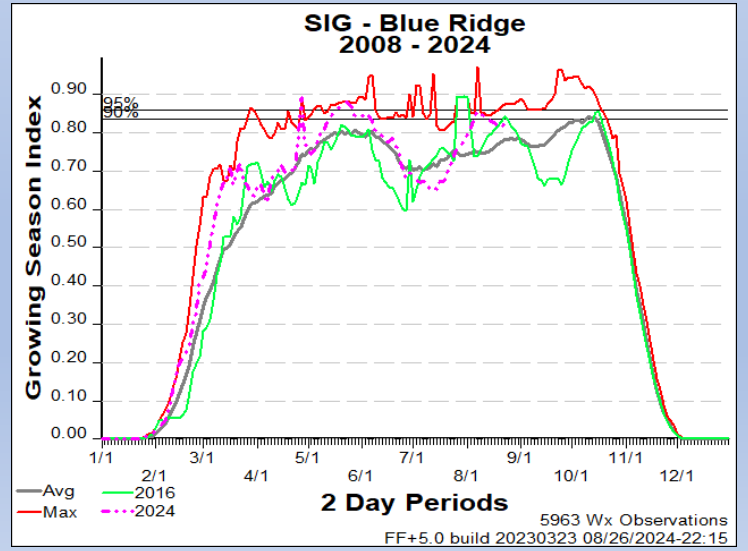


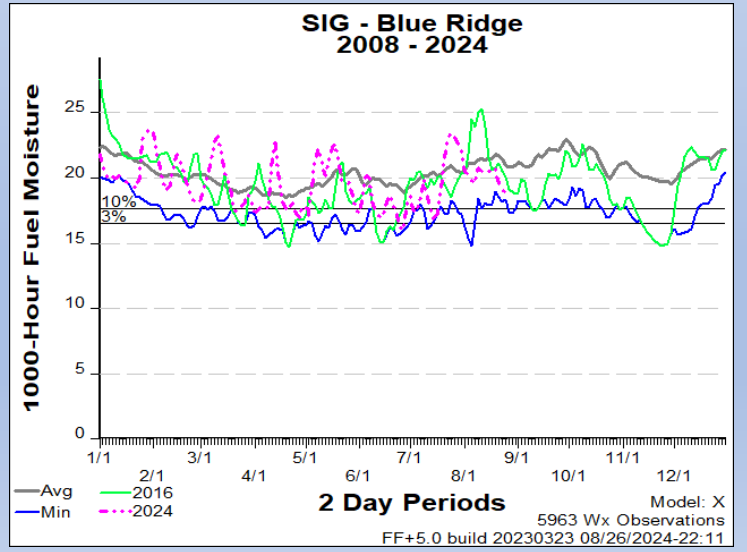




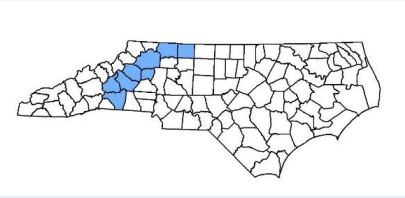




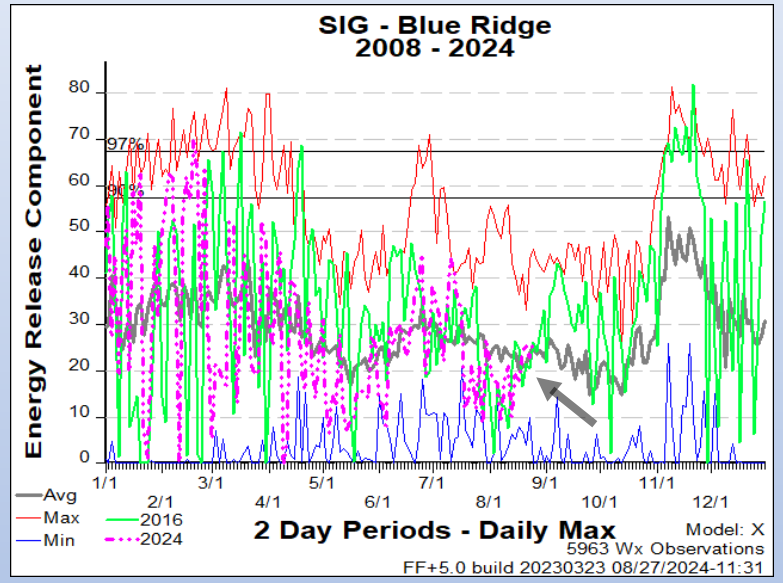




FDRA – Blue Ridge Escarpment



ERC-X



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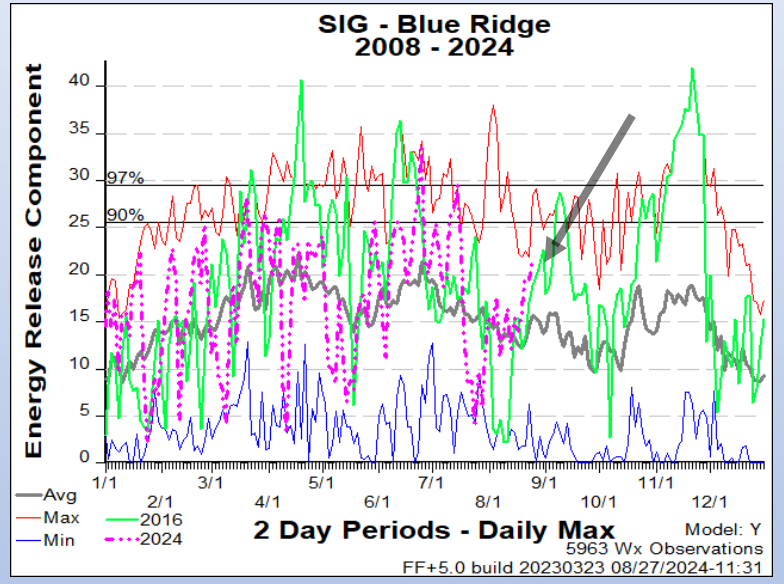
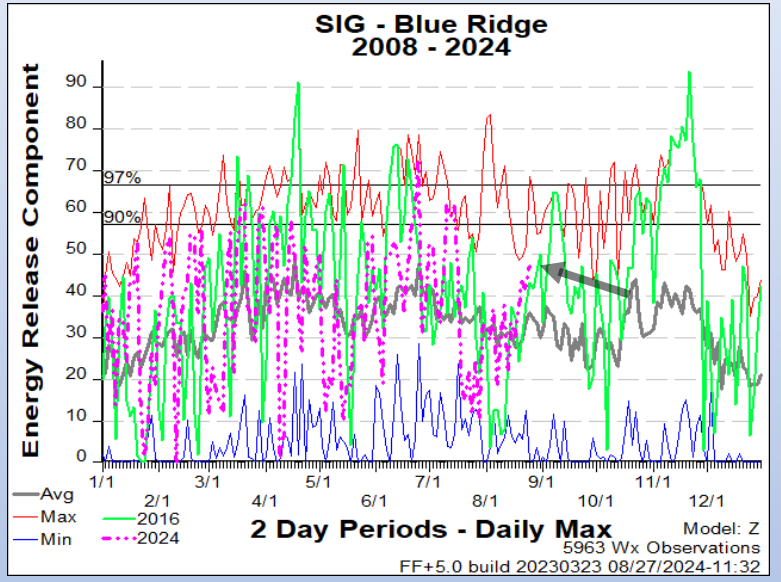


ERC-Z



Comparison of ERC by NFDRS Fuel Model

X: 1's, 10's, Live Component (GSI driven); + Drought Loading

Y: Heavily weighted on 1000's, less on smaller dead; No live; + Drought Loading

Z: Near even distribution between the four dead size classes of 1's, 10's, 100's, 1000's; No live; + Drought Loading

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Average, Max, Min, CY Year 2016 are displayed along with Year-to-Date 2024

Weekly Outlook

Blue Ridge Escarpment 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	TUE 27-Aug	WED 28-Aug	THU 29-Aug	FRI 30-Aug	SAT 31-Aug	SUN 01-Sep	MON 02-Sep
Avg. Max. Temp. (°F)	89	92	91	87	87	84	83
Avg. Min. Humidity (%)	41	40	45	57	60	61	62
Avg. 20' Wind Speed (mph)	2	1	1	1	1	1	2
Avg. Wind Direction*	S	W	SW	W	W	W	W
Avg. Probability of Precip. (%)	8	4	24	50	62	54	46
Days Since a Wetting Rain**	11.5	12.5	13.5	14.5			
Forecast ERC (Fuel Model X)	24.4	27.7	27.5	23.8	19.8	18.6	18.6
Forecast BI (Fuel Model X)	36.7	38.2	39.9	39.4	35.4	33.9	33.7
Forecast IC (Fuel Model X)	4.9	5.5	5.5	4.2	3.0	2.7	2.9
Forecast 100-Hr. FMC	17.2	17.6	17.8	17.9	18.3	18.5	18.6
Forecast 1000-Hr. FMC	18.0	17.7	17.6	17.6	17.6	17.8	18.0
KBDI	375.0						

0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

Data 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

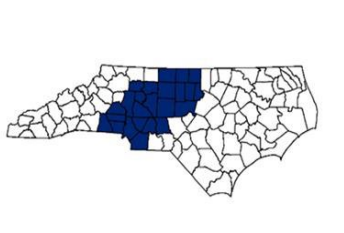
Values in the table above are averages from 3 stations in this FDRA:

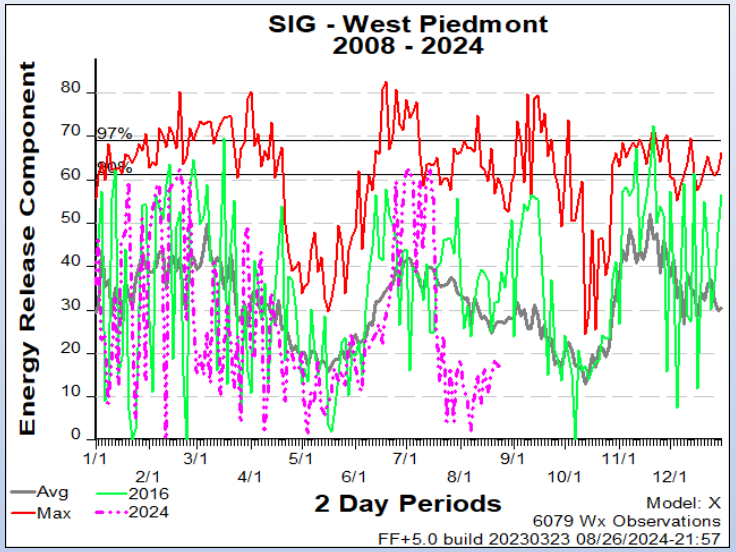
- **Rendezvous Mtn.** (312001)
- **North Cove Pinnacle (fr1)** (314301)
- **Rutherford County** (316302)

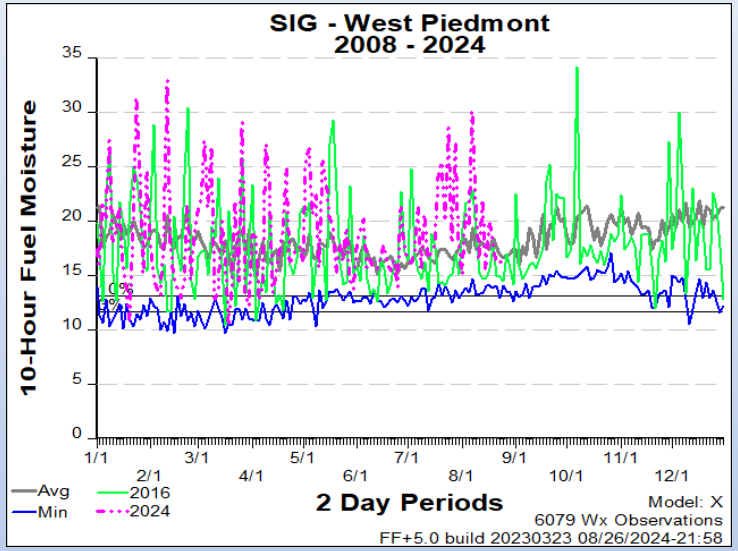
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 40°F	Between 40°F and 50°F	Greater than 50°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 2 mph	Between 2 mph and 4 mph	Greater than 4 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 52	Between 52 and 62	Greater than 62
Burning Index	Less than 116	Between 116 and 136	Greater than 136
Ignition Component	Less than 14	Between 14 and 20	Greater than 20
100-Hour Fuel Moisture	Greater than 18%	Between 16% and 18%	Less than 16%
1000-Hour Fuel Moisture	Greater than 19%	Between 18% and 19%	Less than 18%
KBDI	Less than 351	Between 351 and 508	Greater than 508

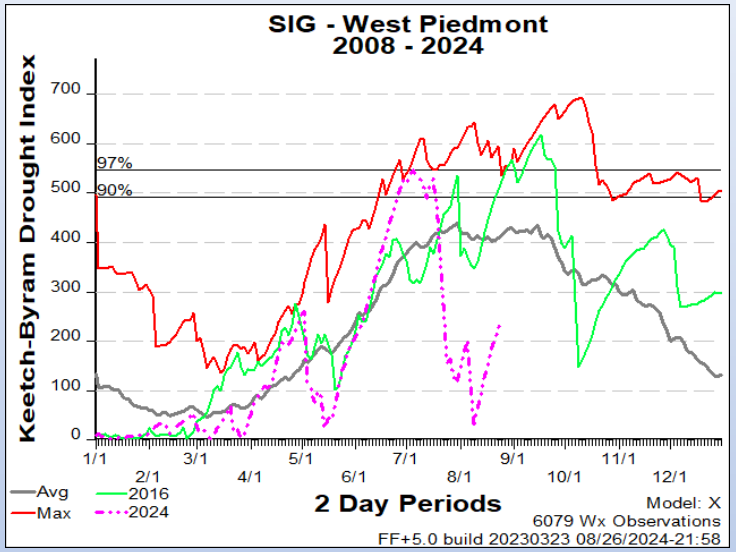
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

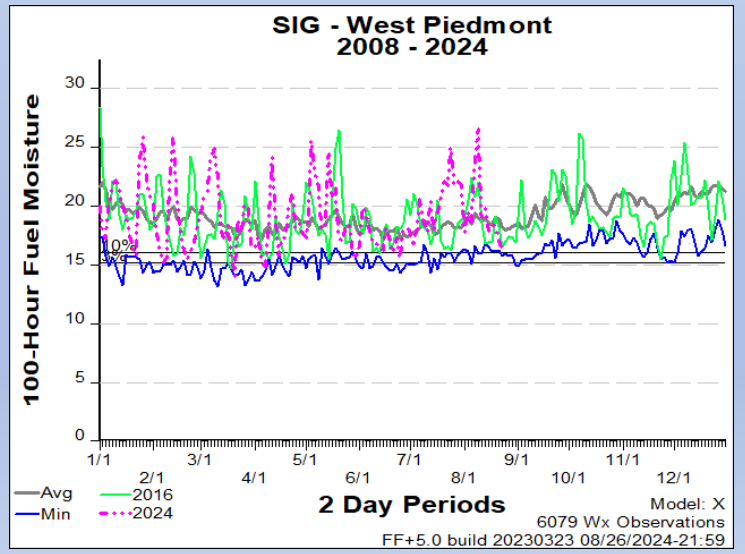
FDRA – Western Piedmont

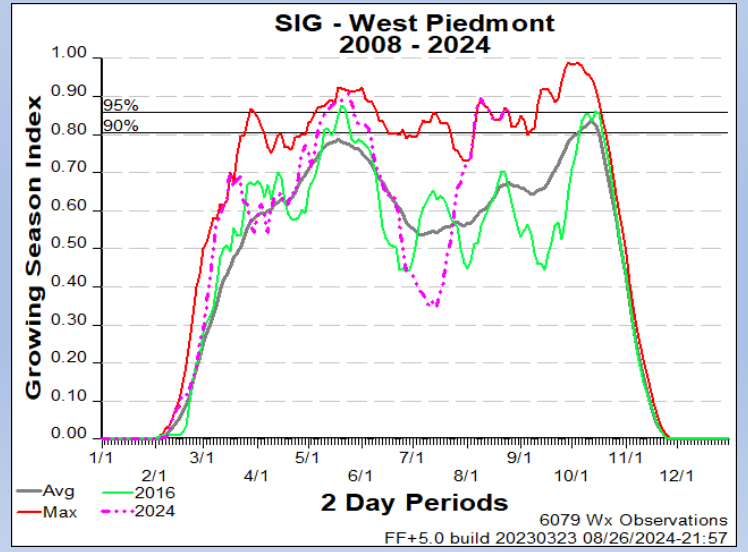


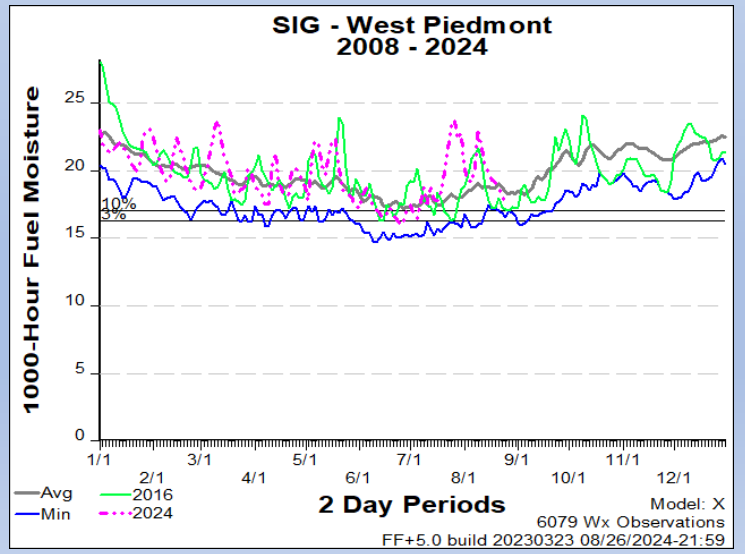












Weekly Outlook

Western 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	TUE 27-Aug	WED 28-Aug	THU 29-Aug	FRI 30-Aug	SAT 31-Aug	SUN 01-Sep	MON 02-Sep
Avg. Max. Temp. (°F)	94	95	95	90	92	89	88
Avg. Min. Humidity (%)	41	41	46	57	56	60	60
Avg. 20' Wind Speed (mph)	2	3	3	3	3	3	3
Avg. Wind Direction*	SW	SW	SW	SE	SSW	SW	SW
Avg. Probability of Precip. (%)	5	3	39	34	37	38	37
Days Since a Wetting Rain**	11.3	12.3	3.7	4.7			
Forecast ERC (Fuel Model X)	16.2	16.3	16.8	15.2	13.6	13.4	13.0
Forecast BI (Fuel Model X)	16.4	19.2	18.0	18.8	17.6	17.3	17.6
Forecast IC (Fuel Model X)	2.8	3.3	3.1	2.4	1.9	1.8	1.7
Forecast 100-Hr. FMC	16.1	16.6	17.0	17.1	17.3	17.4	17.5
Forecast 1000-Hr. FMC	20.3	19.9	19.6	19.4	19.2	19.2	19.1
KBDI	252.0						

0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

Data 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

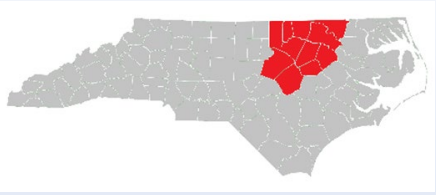
Values in the table above are averages from 3 stations in this FDRA:

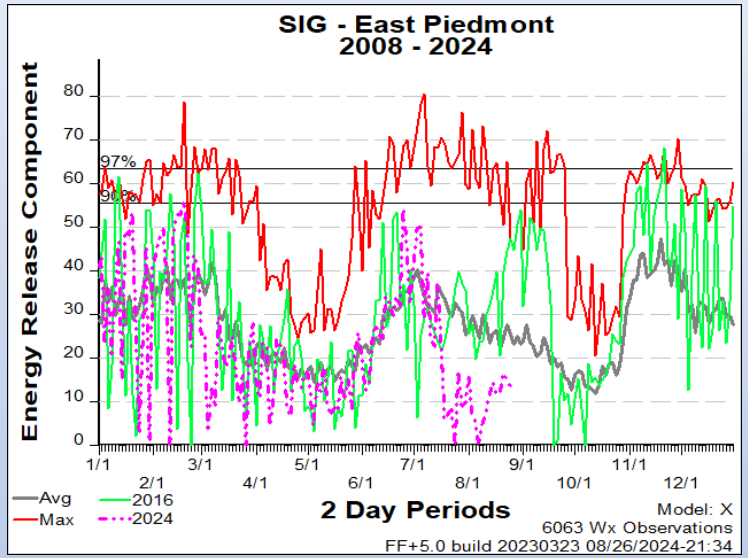
- **Duke Forest** (312501)
- **Lexington** (314602)
- **Mt. Island Lake** (316602)

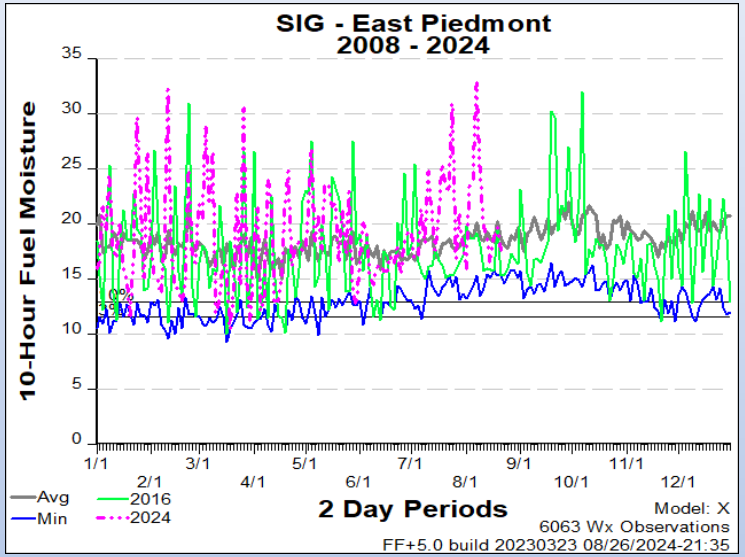
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 40°F	Between 40°F and 50°F	Greater than 50°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 2 mph	Between 2 mph and 4 mph	Greater than 4 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 40	Between 40 and 52	Greater than 52
Burning Index	Less than 95	Between 95 and 120	Greater than 120
Ignition Component	Less than 9	Between 9 and 14	Greater than 14
100-Hour Fuel Moisture	Greater than 18%	Between 17% and 18%	Less than 17%
1000-Hour Fuel Moisture	Greater than 19%	Between 18% and 19%	Less than 18%
KBDI	Less than 344	Between 344 and 479	Greater than 479

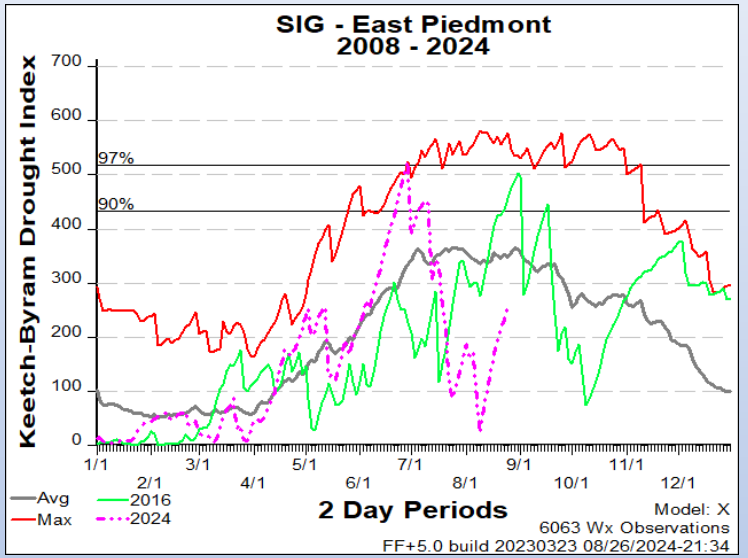
Other factors to consider when determining fire danger: **sky conditions, precipitation amount, number of days since rain,** and **season**

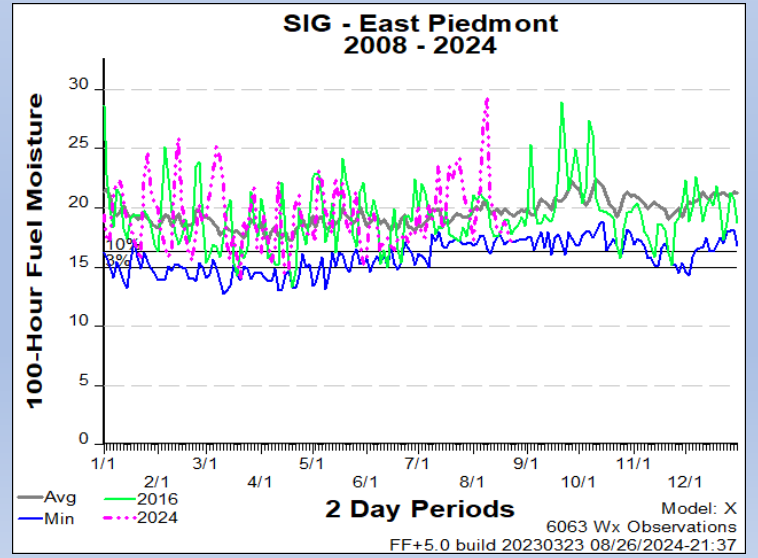
FDRA – Eastern Piedmont

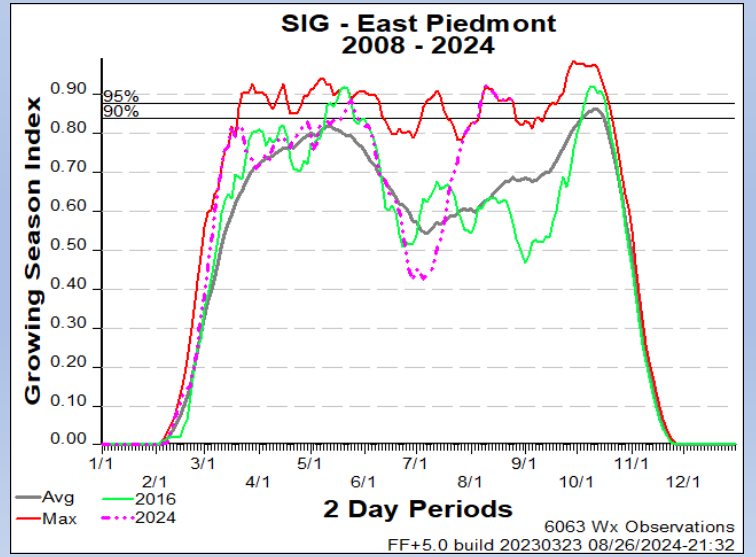


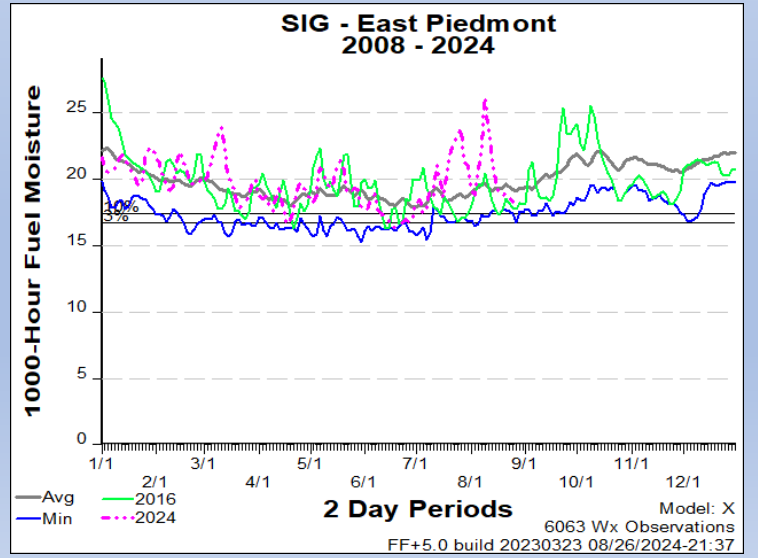












Weekly Outlook

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	TUE 27-Aug	WED 28-Aug	THU 29-Aug	FRI 30-Aug	SAT 31-Aug	SUN 01-Sep	MON 02-Sep
Avg. Max. Temp. (°F)	94	96	97	89	91	89	88
Avg. Min. Humidity (%)	43	43	49	63	59	63	61
Avg. 20' Wind Speed (mph)	3	4	5	3	3	4	4
Avg. Wind Direction*	SW	SW	SW	ESE	S	SW	SSW
Avg. Probability of Precip. (%)	12	4	46	37	31	38	38
Days Since a Wetting Rain**	1.0	2.0	0.0	1.0			
Forecast ERC (Fuel Model X)	15.4	16.6	17.7	15.7	14.2	13.4	12.9
Forecast BI (Fuel Model X)	18.7	23.0	22.2	20.8	20.8	19.4	19.5
Forecast IC (Fuel Model X)	2.7	3.8	3.9	2.7	2.3	1.9	1.7
Forecast 100-Hr. FMC	17.1	17.2	17.3	17.3	17.5	17.5	17.5
Forecast 1000-Hr. FMC	20.6	20.3	20.0	19.7	19.5	19.4	19.3
KBDI	260.8						

0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

Data 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

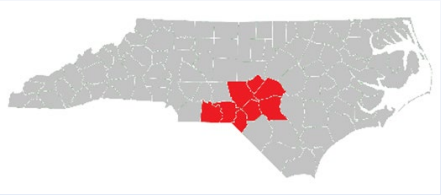
Values in the table above are averages from 4 stations in this FDRA:

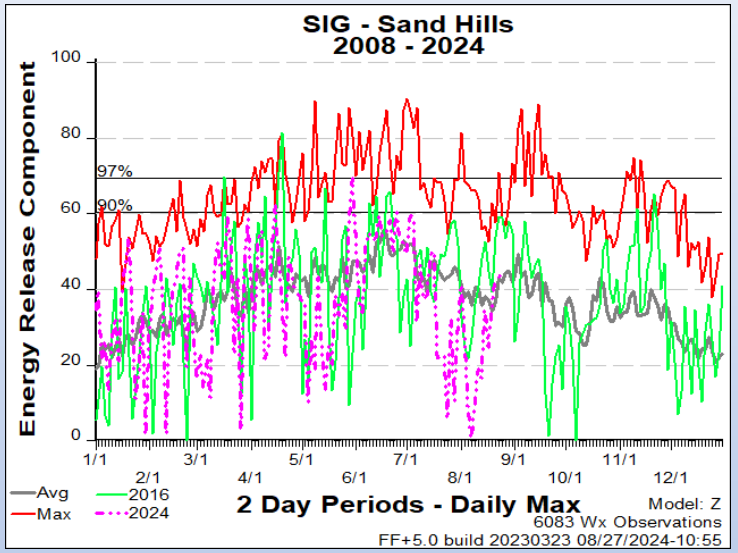
- **Oxford Tobacco Research Stn** (310841)
- **Upper Coastal Plain Res Stn** (312940)
- **Lake Wheeler Rd Field Lab** (314941)
- **Central Crops Research Station** (317441)

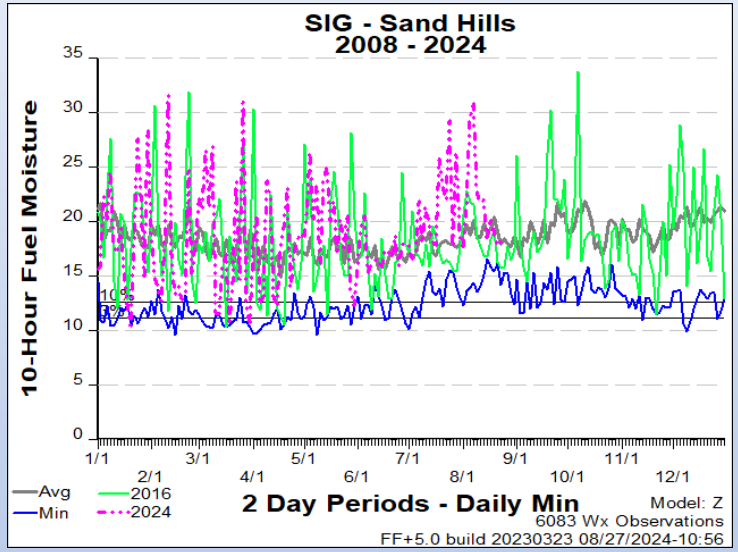
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 10 mph	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
Burning 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

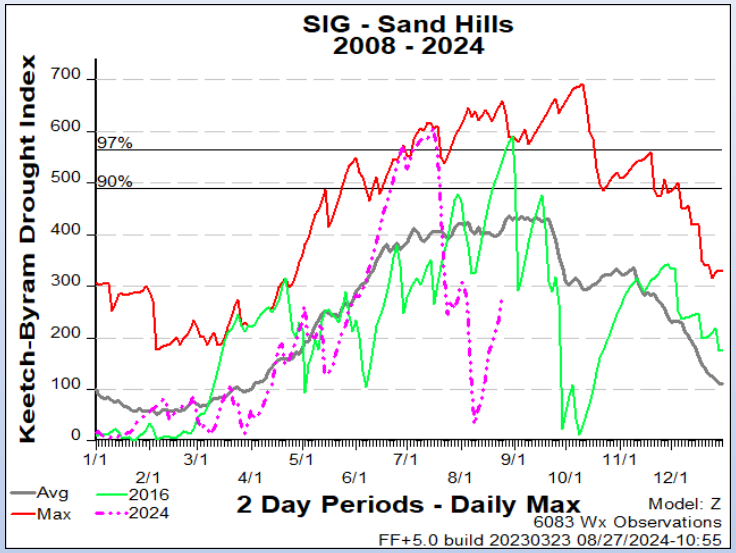
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

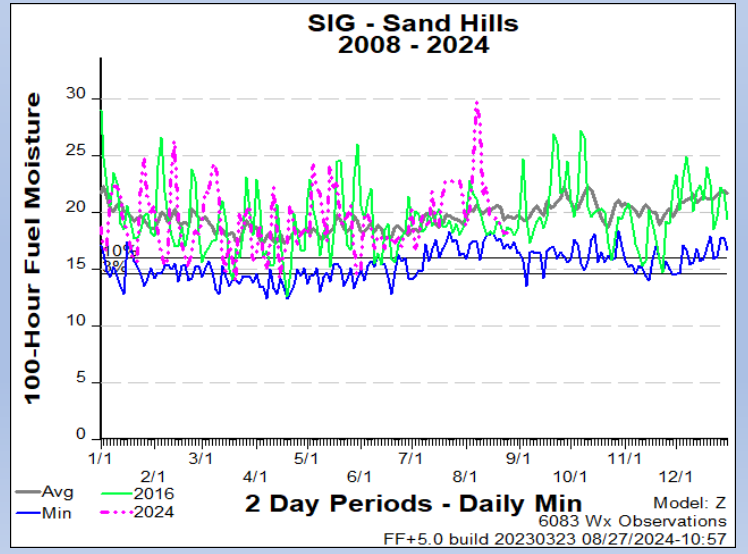
FDRA – Sandhills

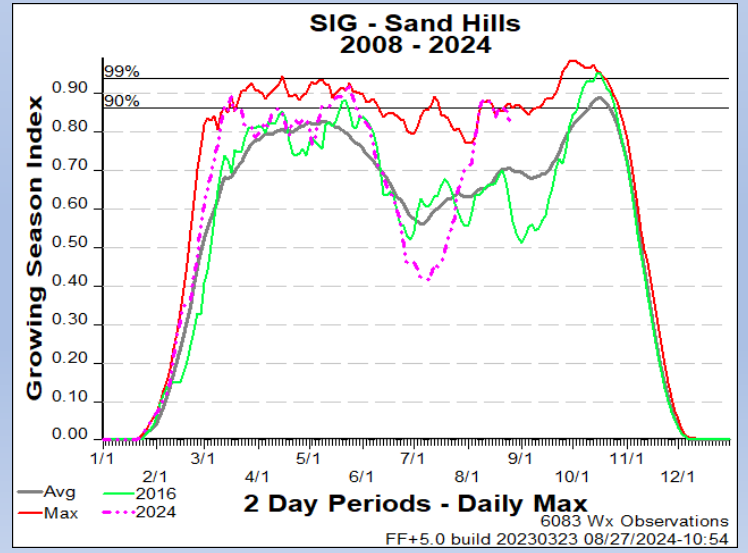


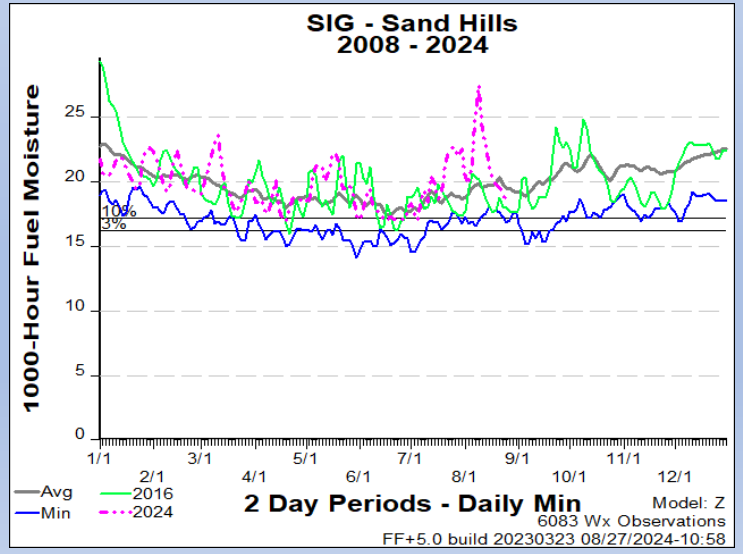












Weekly Outlook

Sandhills 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	TUE 27-Aug	WED 28-Aug	THU 29-Aug	FRI 30-Aug	SAT 31-Aug	SUN 01-Sep	MON 02-Sep
Avg. Max. Temp. (°F)	95	96	96	91	92	90	89
Avg. Min. Humidity (%)	38	41	44	51	53	56	56
Avg. 20' Wind Speed (mph)	3	4	5	3	3	4	4
Avg. Wind Direction*	SW	SW	SSW	SSE	SSW	SSW	S
Avg. Probability of Precip. (%)	3	2	31	35	28	39	43
Days Since a Wetting Rain**	10.3	11.3	4.0	5.0			
Forecast ERC (Fuel Model Z)	37.2	38.8	39.9	37.4	35.8	34.8	33.5
Forecast BI (Fuel Model Z)	28.3	33.5	31.5	29.8	28.8	28.3	28.0
Forecast IC (Fuel Model Z)	6.2	8.6	8.8	6.1	5.1	4.7	3.9
Forecast 100-Hr. FMC	17.6	17.6	17.7	17.9	18.0	18.3	18.4
Forecast 1000-Hr. FMC	20.9	20.6	20.3	20.0	19.8	19.9	19.8
KBDI	266.3						

0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

Data 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

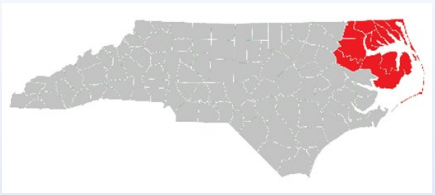
Values in the table above are averages from 3 stations in this FDRA:

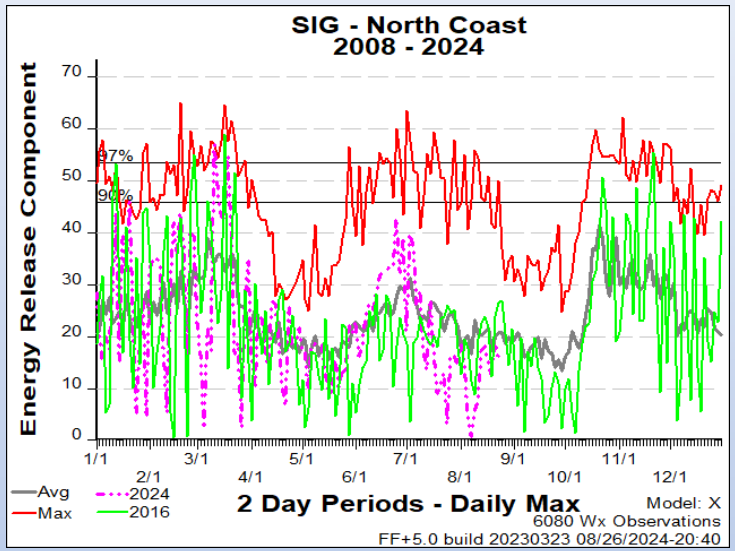
- **Sandhills Research Station** (317040)
- **Rockingham** (318202)
- **Fort Liberty** (318503)

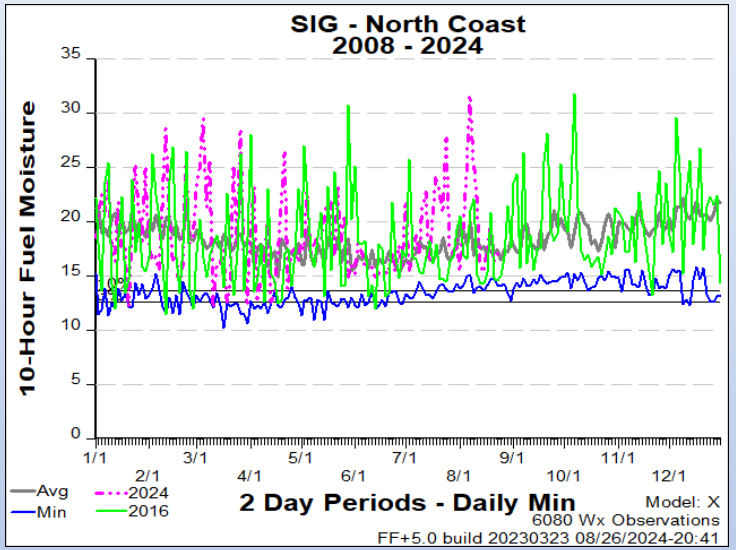
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 40%	Between 30% and 40%	Less than 30%
Avg. 20' Wind Speed	Less than 4 mph	Between 4 mph and 8 mph	Greater than 8 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 52.4	Between 52.4 and 62	Greater than 62
Burning Index	Less than 45.6	Between 45.6 and 53.3	Greater than 53.3
Ignition Component	Less than 13.6	Between 13.6 and 18.8	Greater than 18.8
100-Hour Fuel Moisture	Greater than 17.4%	Between 16% and 17.4%	Less than 16%
1000-Hour Fuel Moisture	Greater than 18.2%	Between 17.2% and 18.2%	Less than 17.2%
KBDI	Less than 397	Between 397 and 500	Greater than 500

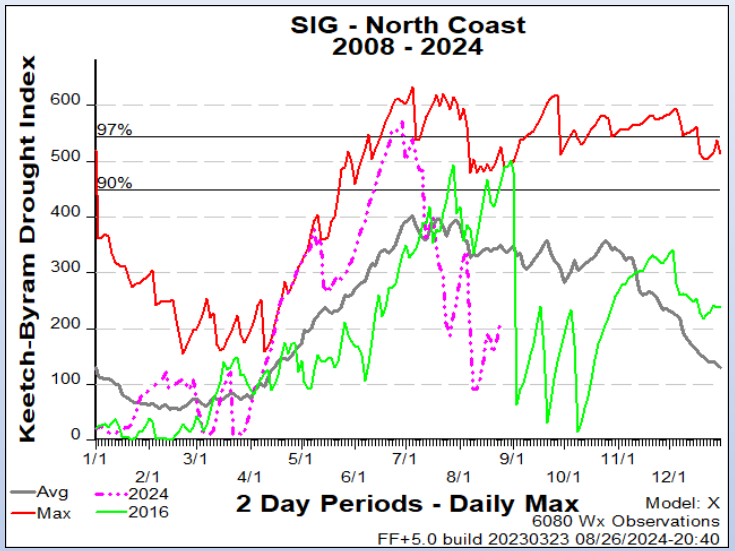
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

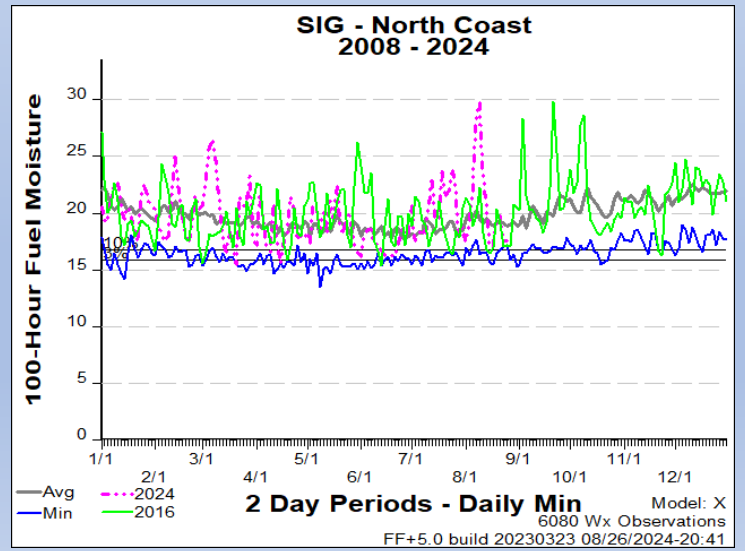
FDRA – North Coast

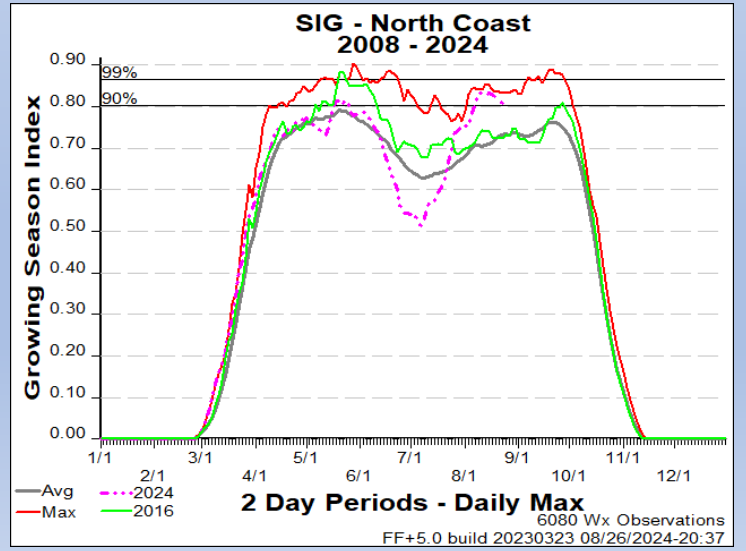


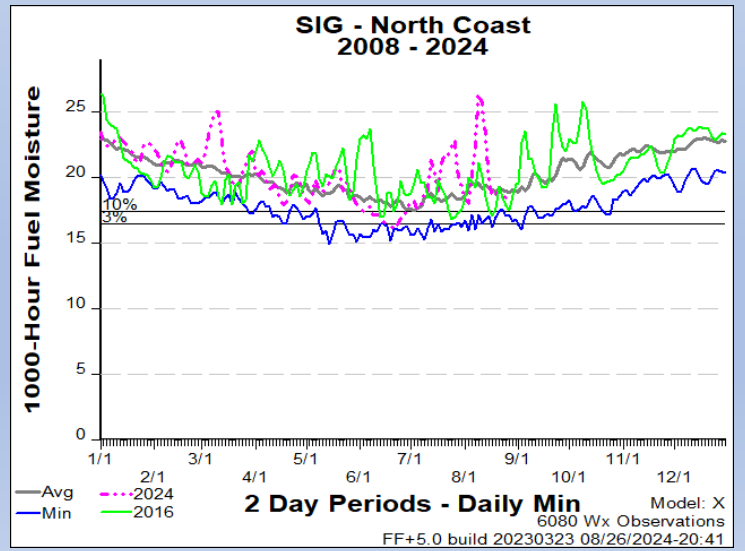












Weekly Outlook

Northern Coastal 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	TUE 27-Aug	WED 28-Aug	THU 29-Aug	FRI 30-Aug	SAT 31-Aug	SUN 01-Sep	MON 02-Sep
Avg. Max. Temp. (°F)	91	95	94	88	90	89	87
Avg. Min. Humidity (%)	54	49	56	65	58	61	60
Avg. 20' Wind Speed (mph)	4	5	4	4	4	6	5
Avg. Wind Direction*	SSW	SW	SSW	NE	SSE	SW	SW
Avg. Probability of Precip. (%)	20	7	32	35	27	39	41
Days Since a Wetting Rain**	9.0	10.0	0.0	1.0			
Forecast ERC (Fuel Model X)	13.6	14.3	15.8	14.1	12.6	13.0	12.4
Forecast BI (Fuel Model X)	18.3	21.2	20.6	17.5	17.0	17.2	14.1
Forecast IC (Fuel Model X)	2.1	2.8	3.2	1.9	1.5	1.6	1.2
Forecast 100-Hr. FMC	17.3	17.5	17.6	17.6	17.7	17.8	17.8
Forecast 1000-Hr. FMC	20.7	20.4	20.1	19.9	19.7	19.6	19.5
KBDI	221.0						

0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

Data 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

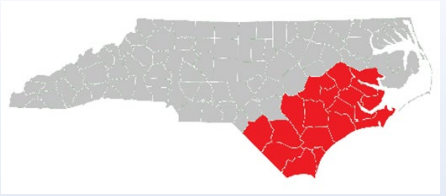
Values in the table above are averages from 4 stations in this FDRA:

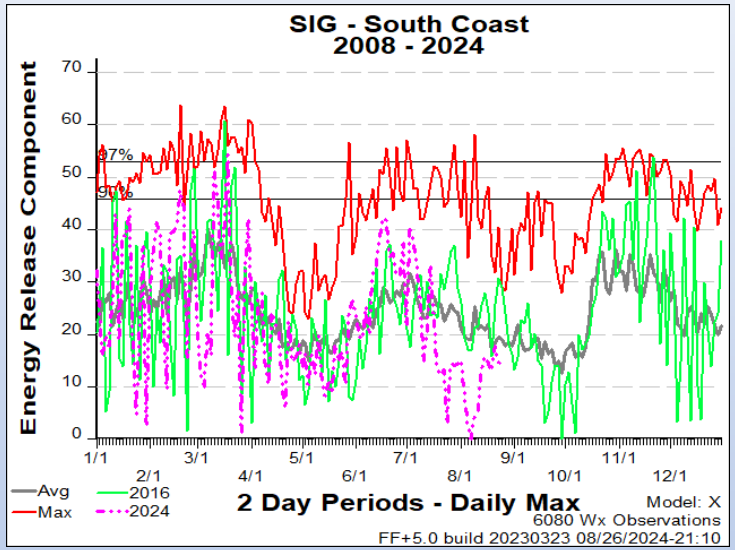
- **Elizabeth City** (311503)
- **Greens Cross** (313001)
- **Pocosin Lakes** (315201)
- **Fairfield** (317901)

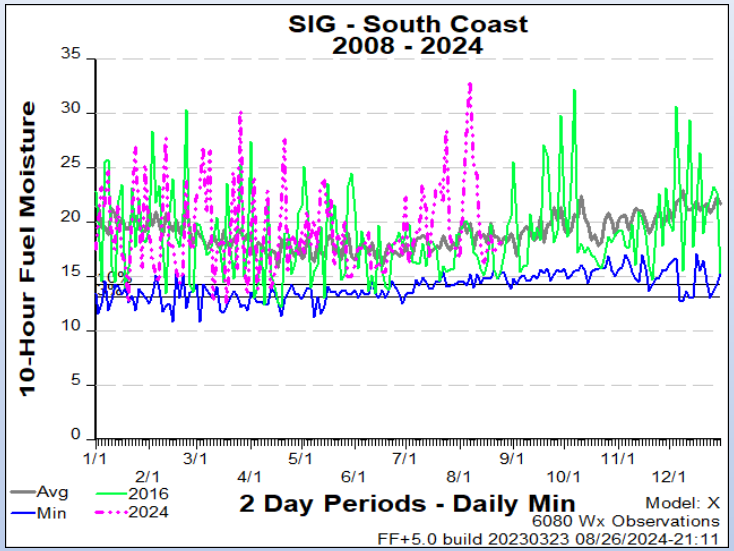
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 45°F	Between 45°F and 55°F	Greater than 55°F
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 10 mph	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 39.3	Between 39.3 and 48	Greater than 48
Burning Index	Less than 78	Between 78 and 96.8	Greater than 96.8
Ignition Component	Less than 9.3	Between 9.3 and 12.8	Greater than 12.8
100-Hour Fuel Moisture	Greater than 17.7%	Between 16.8% and 17.7%	Less than 16.8%
1000-Hour Fuel Moisture	Greater than 18.5%	Between 17.5% and 18.5%	Less than 17.5%
KBDI	Less than 365	Between 365 and 463	Greater than 463

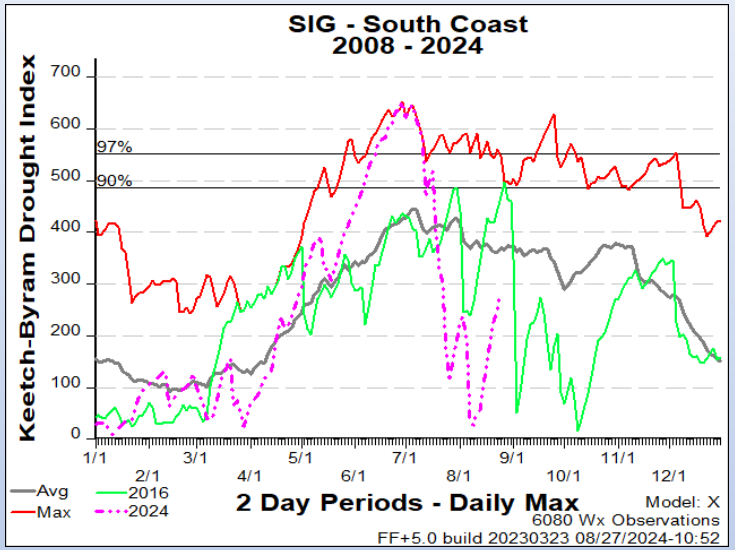
Other factors to consider when determining fire danger: **sky conditions, precipitation amount, number of days since rain,** and **season**

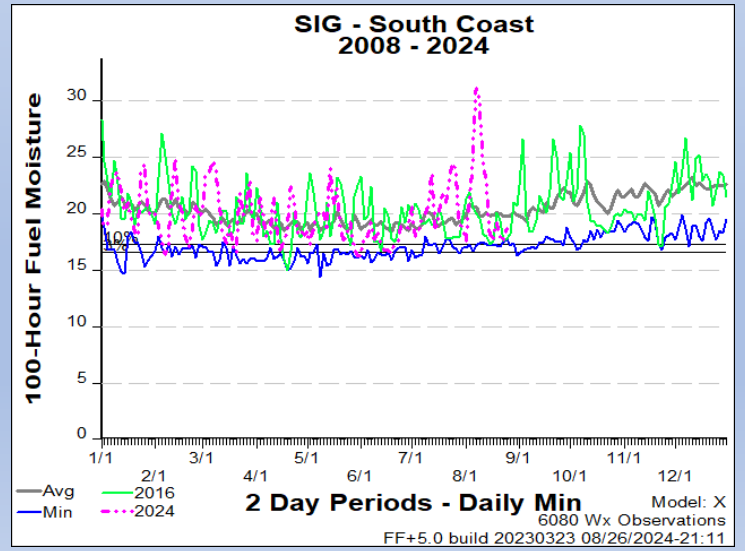
FDRA – South Coast

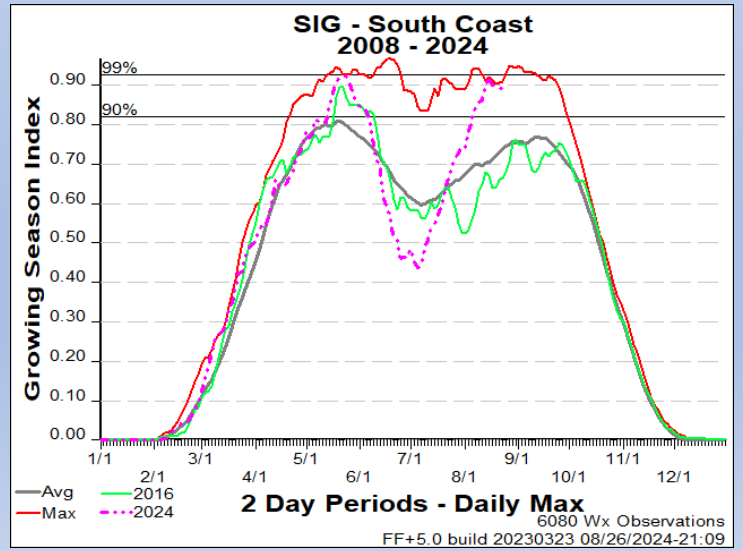


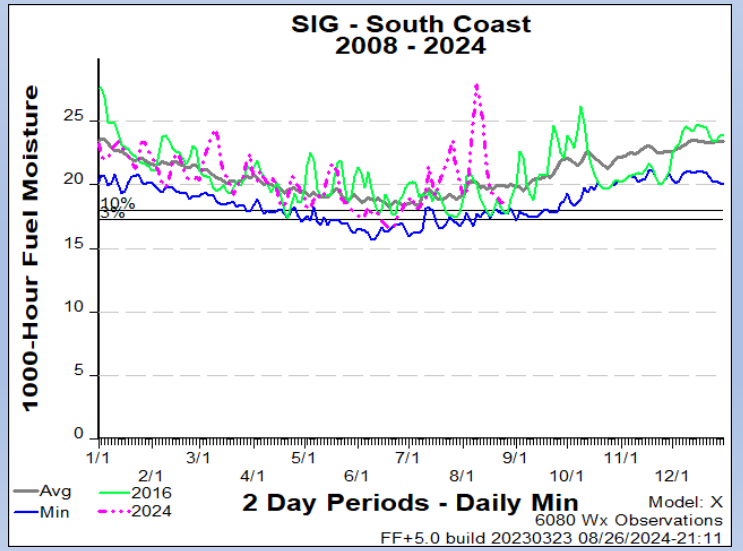












Weekly Outlook

Southern Coastal 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	TUE 27-Aug	WED 28-Aug	THU 29-Aug	FRI 30-Aug	SAT 31-Aug	SUN 01-Sep	MON 02-Sep
Avg. Max. Temp. (°F)	91	94	94	90	91	90	88
Avg. Min. Humidity (%)	53	50	52	60	59	59	64
Avg. 20' Wind Speed (mph)	3	4	4	2	3	4	3
Avg. Wind Direction*	SSW	SW	SW	S	SSW	SSW	SSW
Avg. Probability of Precip. (%)	6	4	23	35	25	37	44
Days Since a Wetting Rain**	11.4	12.4	9.1	10.1			
Forecast ERC (Fuel Model X)	13.1	13.6	14.2	13.4	12.1	12.2	11.9
Forecast BI (Fuel Model X)	17.3	18.5	19.7	16.7	16.7	17.5	16.2
Forecast IC (Fuel Model X)	1.9	2.3	2.7	1.9	1.6	1.7	1.5
Forecast 100-Hr. FMC	17.9	18.0	18.1	18.2	18.3	18.5	18.6
Forecast 1000-Hr. FMC	21.1	20.8	20.5	20.3	20.2	20.2	20.1
KBDI	290.4						

0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

Data 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 7 stations in this FDRA:

- **Finch's Station** (317501)
- **Beaufort** (317801)
- **New Bern** (319004)
- **Turnbull Creek** (319302)
- **Hofmann Forest** (319507)
- **Whiteville** (319701)
- **Sunny Point** (319803)

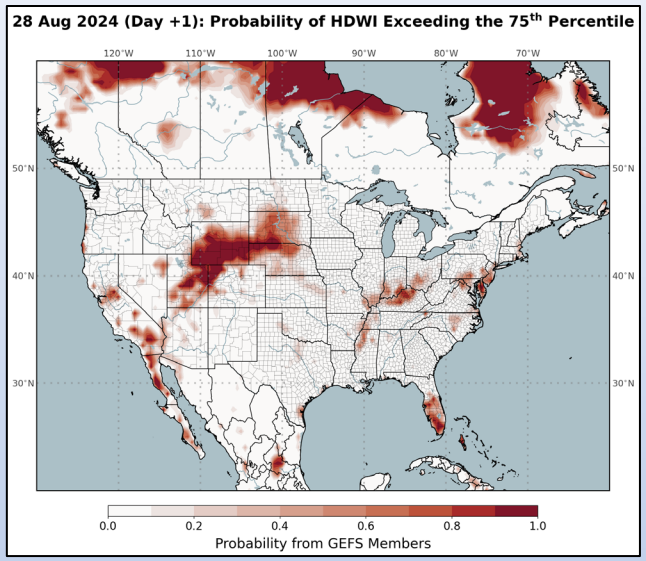
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 65°F	Greater than 65°F
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 5 mph	Between 5 mph and 10 mph	Greater than 10 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 36.4	Between 36.4 and 47.2	Greater than 47.2
Burning Index	Less than 68.3	Between 68.3 and 89.5	Greater than 89.5
Ignition Component	Less than 7.9	Between 7.9 and 12	Greater than 12
100-Hour Fuel Moisture	Greater than 18.2%	Between 17.3% and 18.2%	Less than 17.3%
1000-Hour Fuel Moisture	Greater than 19%	Between 18% and 19%	Less than 18%
KBDI	Less than 385	Between 385 and 486	Greater than 486

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

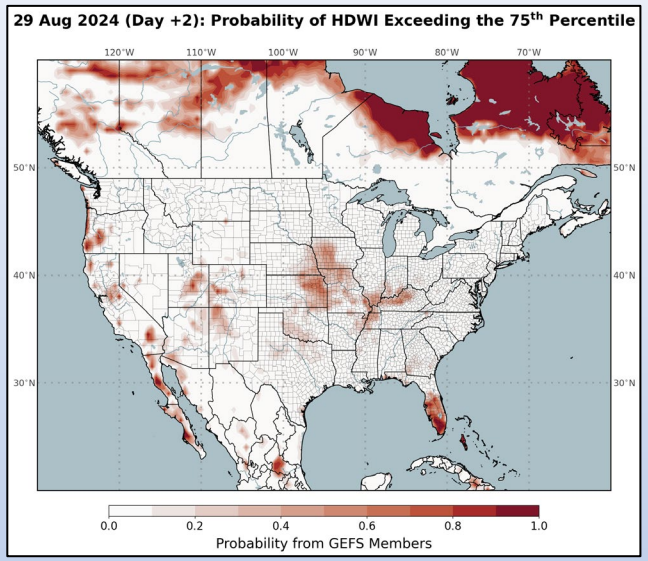
Statewide Slides

Hot-Dry-Windy Index (HDW)

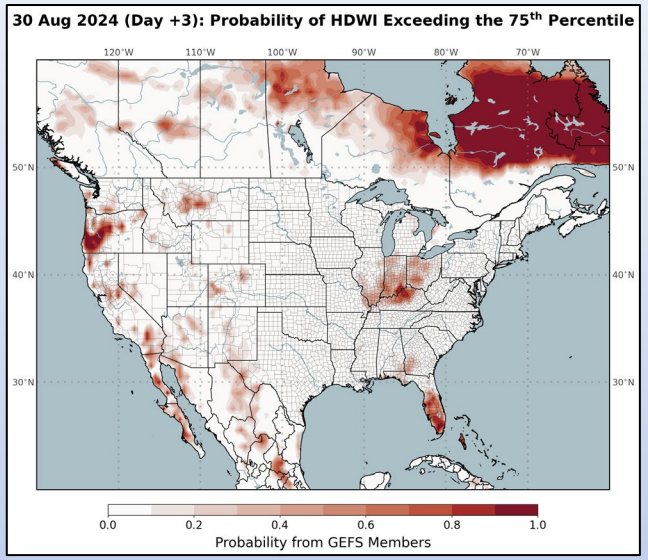
Wednesday > 75th Percentile



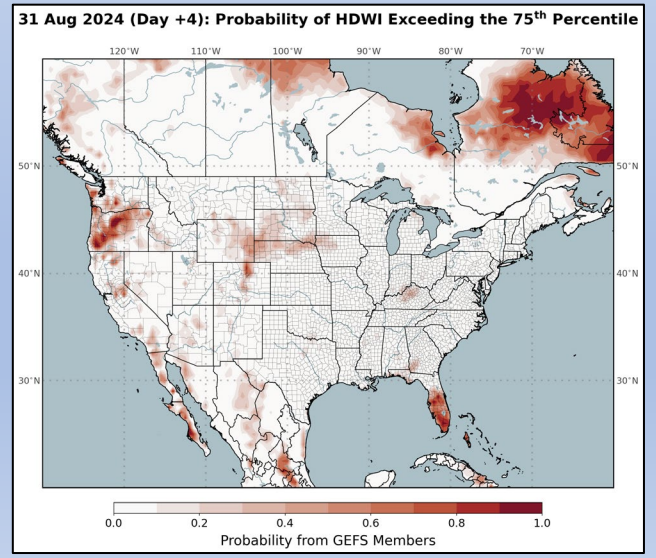
Thursday > 75th Percentile



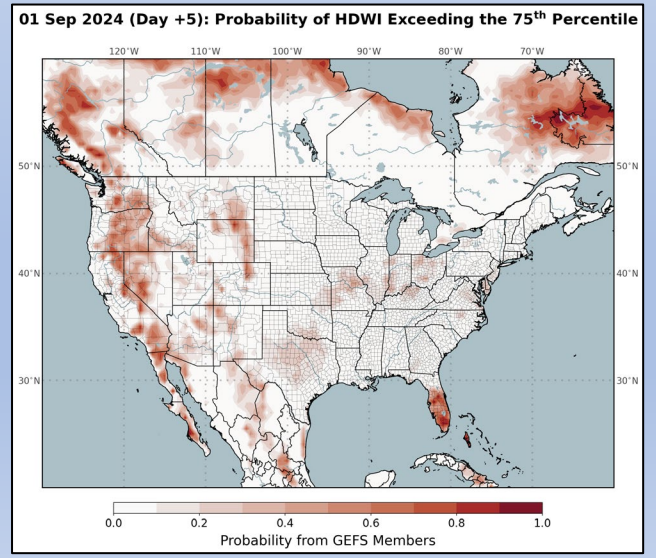
Friday > 75th Percentile



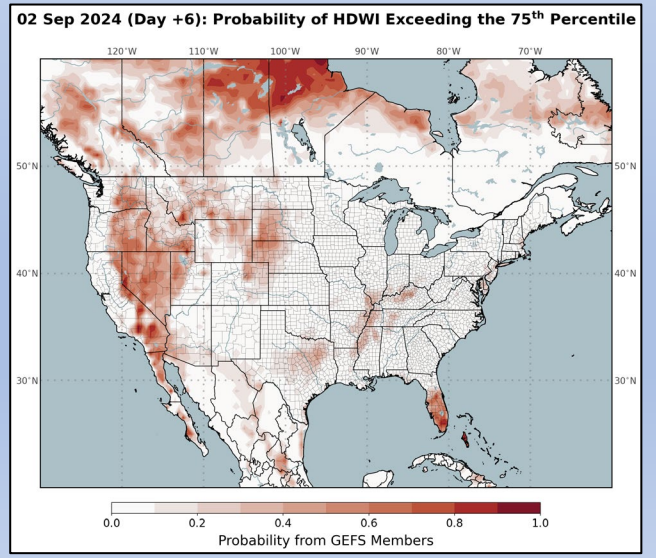
Saturday > 75th Percentile



Sunday > 75th Percentile



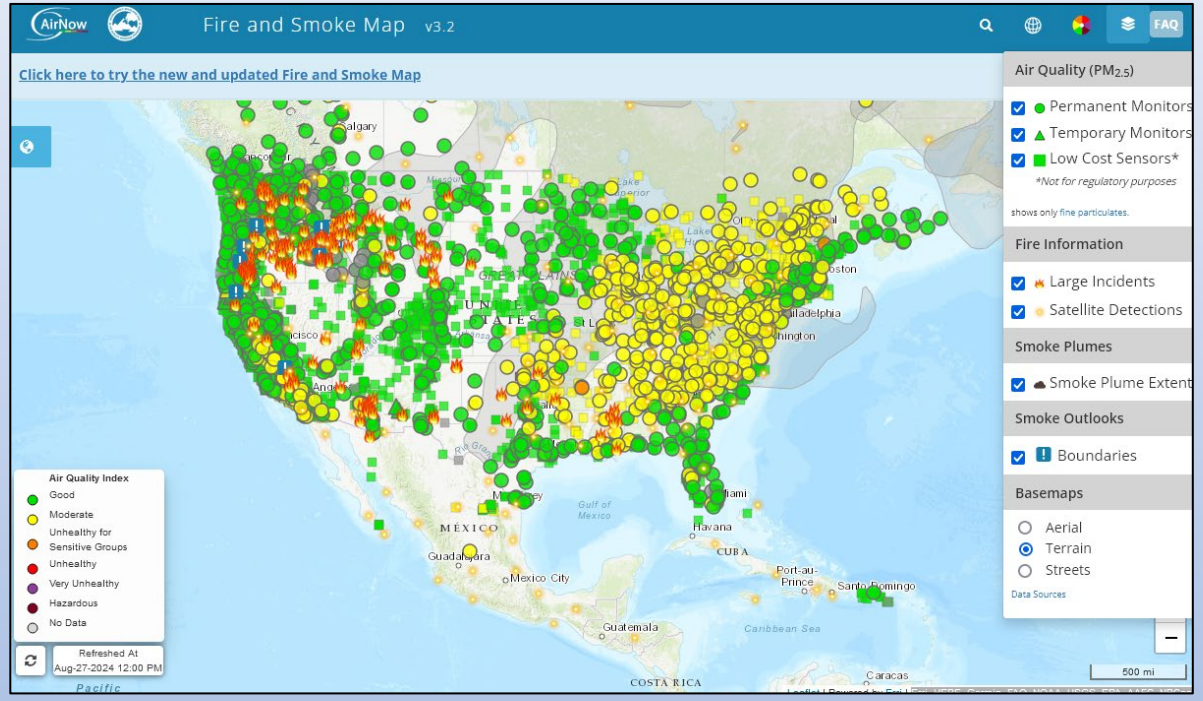
Monday > 75th Percentile



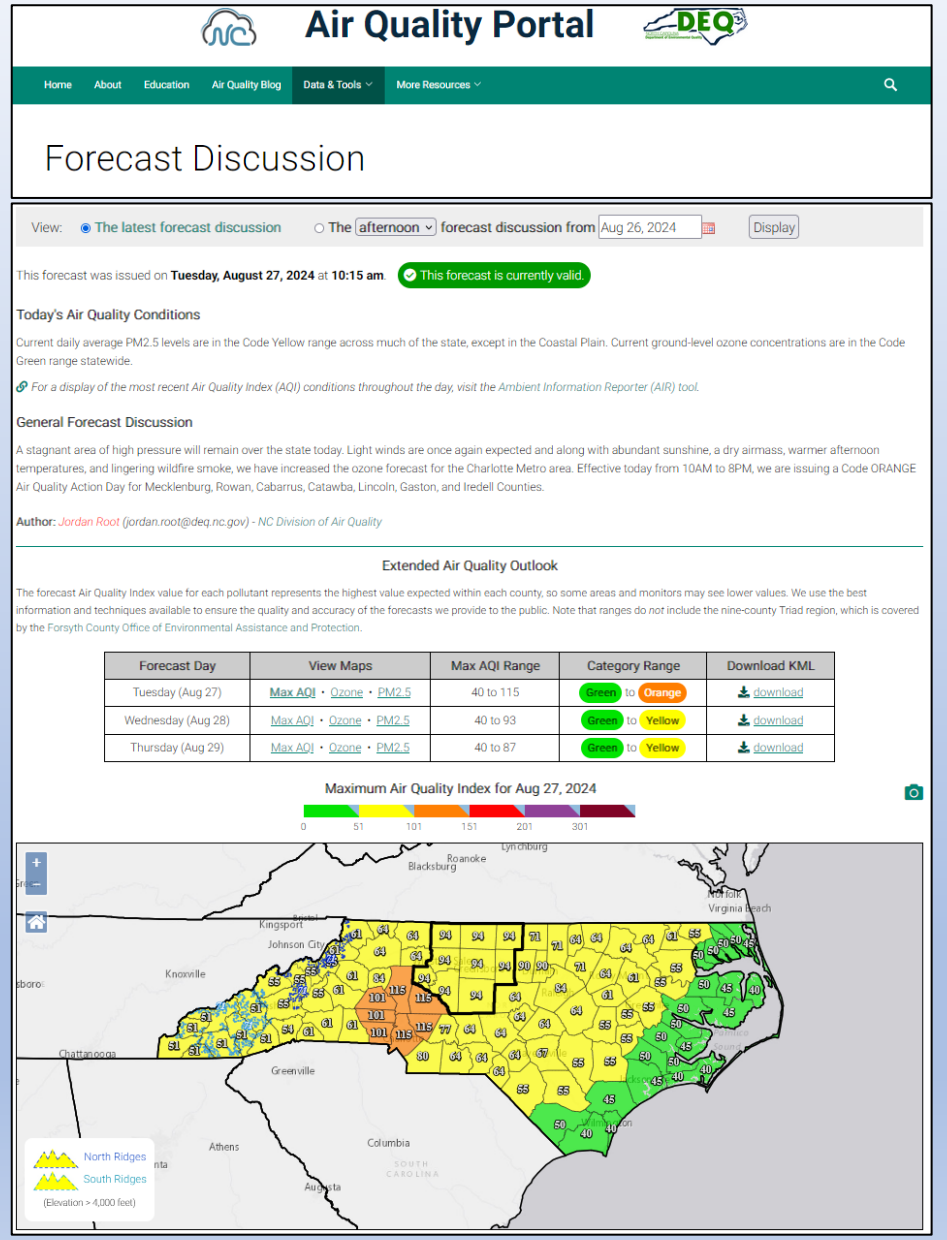
- Another visualization tool to pick up on broader weather, but with *limitations
- Only uses Max VPD (atmospheric moisture & temp) & Max Wind Speed to generate outputs
- Coarse Resolution - 0.5 Degree Grid
- **<u>No</u> Account of Local Fuel Conditions & Topo Influences**

https://www.hdwindex.org/probs.html

Air Quality Notes



https://fire.airnow.gov/#



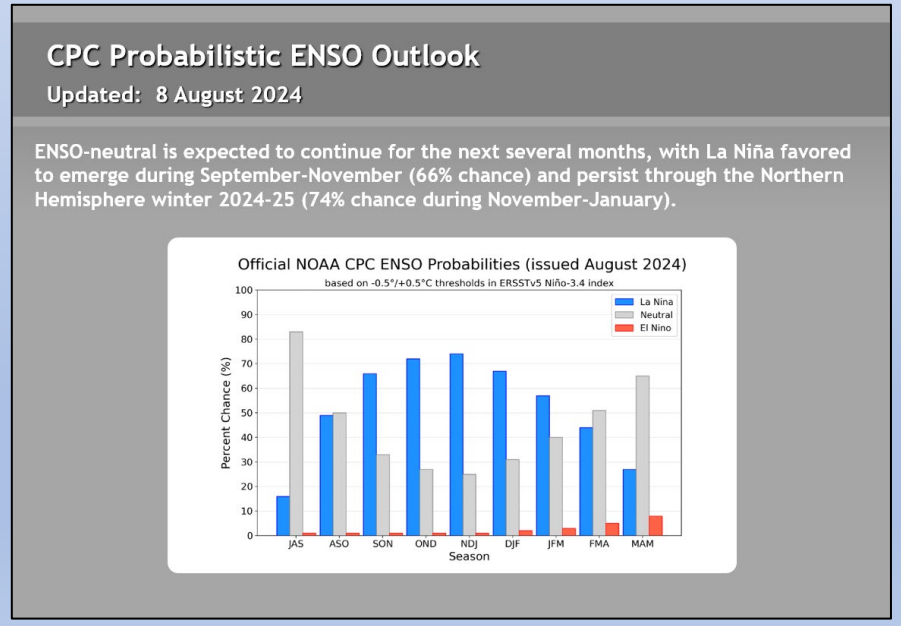
https://airquality.climate.ncsu.edu/discussion/?view=latest

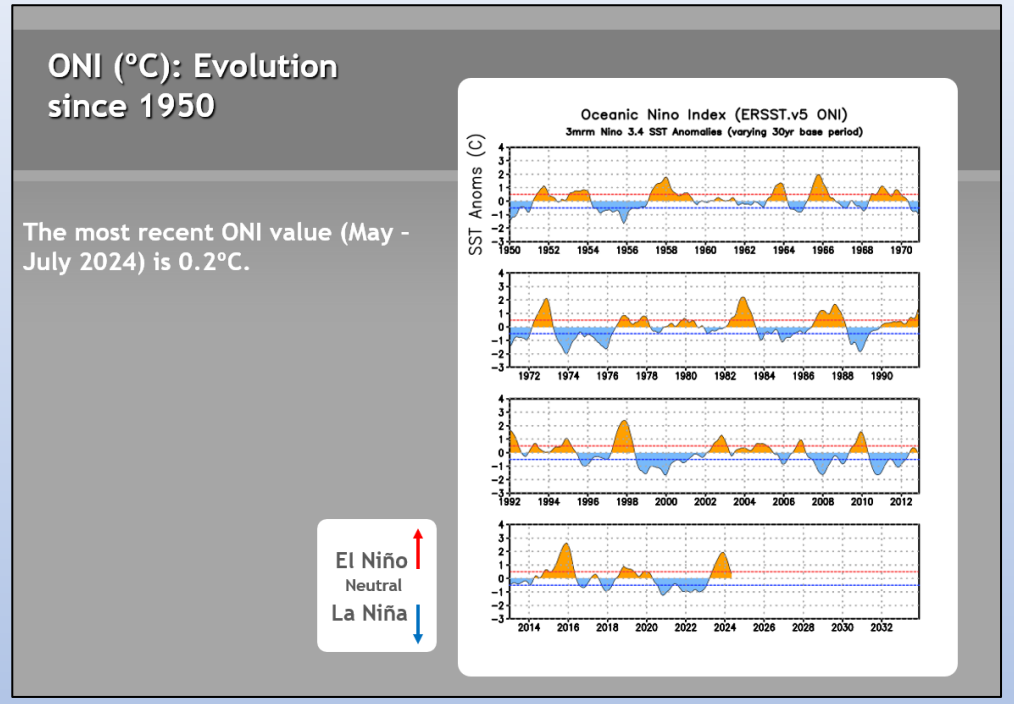
ENSO Notes from the CPC (8/8/24 Update)

ENSO Alert System Status: La Niña Watch

ENSO-neutral is expected to continue for the next several months, with La Niña favored to emerge during September-November (66% chance) and persist through the Northern Hemisphere winter 2024-25 (74% chance during November-January).

ENSO, or El Nino 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 Nina, NC has drier than normal conditions and can have more fire occurrence. However, La Nina also can lead to more tropical activity. El Nino, 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 Nina, the departure from average SST must be at least -0.5° C (line shown in green) for 3 consecutive months. For El Nino, the departure must be at least 0.5° C above average for 3 consecutive months.





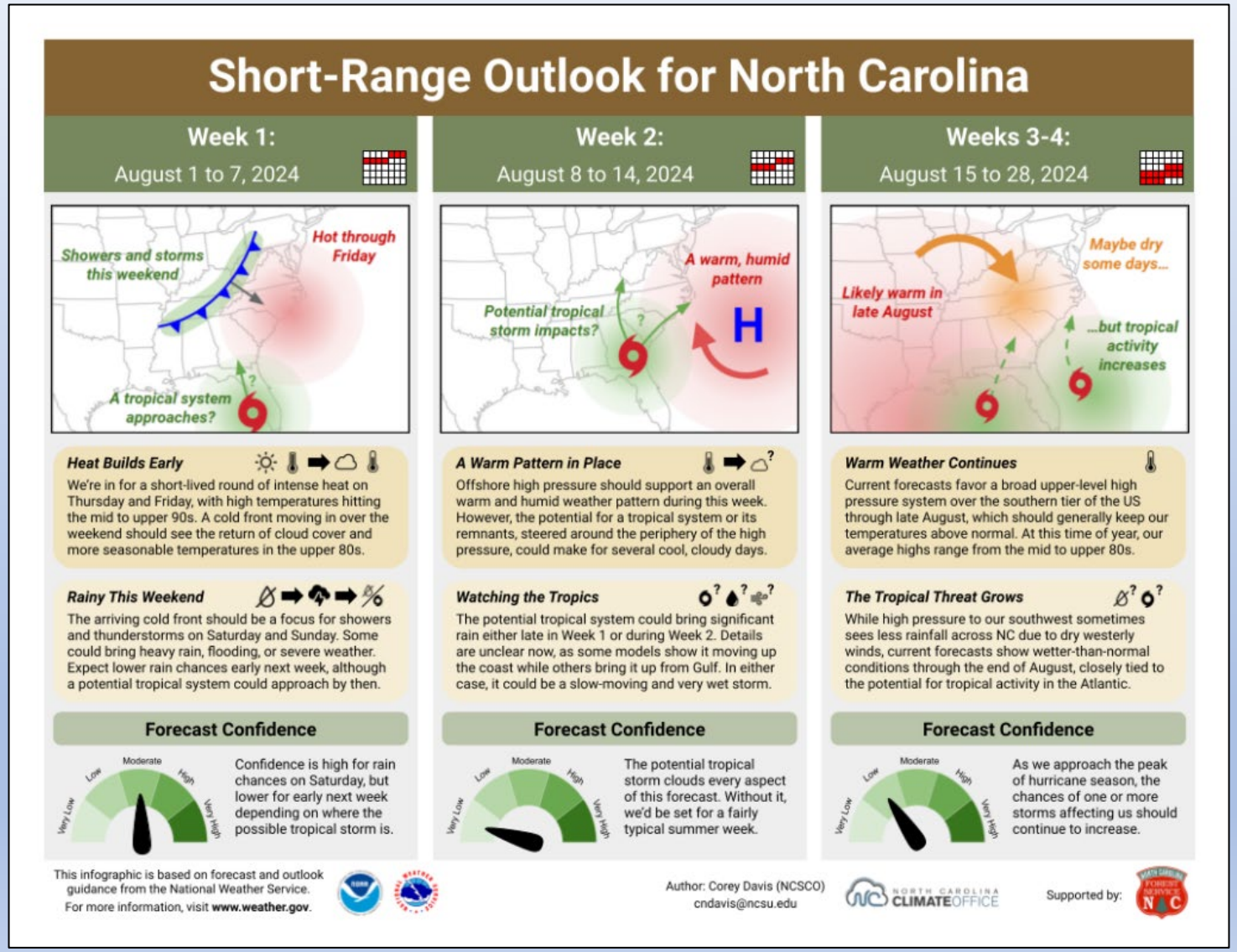
From the most recent CPC Diagnostic Discussion (ENSO Diagnostics Discussion):

[The IRI plume indicates that Niño-3.4 is most likely to be below La Niña thresholds for four overlapping seasons, from September-November 2024 through December 2024 - February 2025 [Fig. 6]. Based on updated guidance and recent observations, the forecast team predicts nearly equal chances for ENSO-neutral and La Niña in August-October 2024, with higher odds for La Niña in September-November. Although the rate of SST cooling has been slower than previously anticipated, below-average subsurface temperatures and low-level easterly wind anomalies remain conducive to La Niña development in the coming months. In summary, ENSO-neutral is expected to continue for the next several months, with La Niña favored to emerge during September-November (66% chance) and persist through the Northern Hemisphere winter 2024-25 (74% chance during November-January; [Fig. 7]).

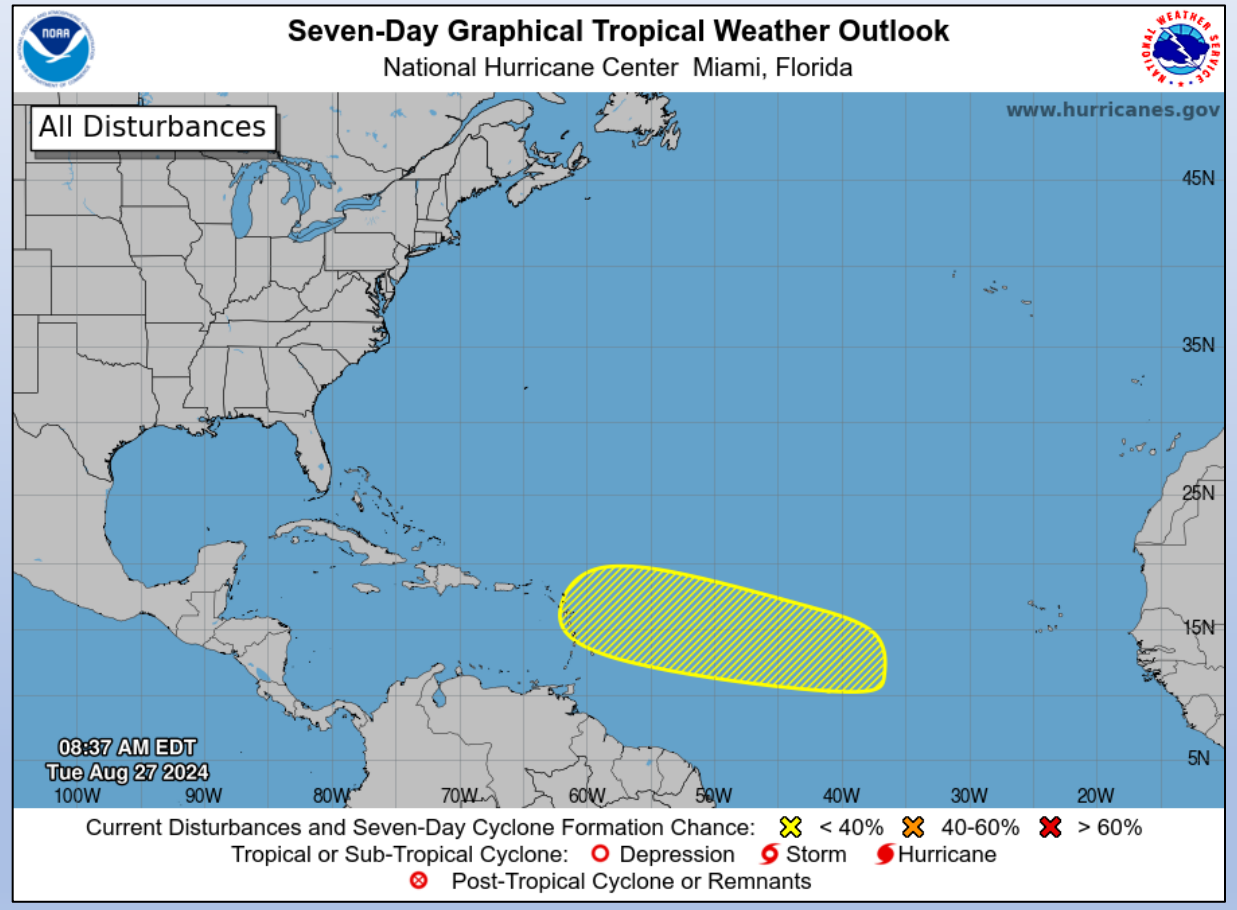
Slide Source: *https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.ppt*

State Climate Office: Short-Range Monthly Outlook for NC

Released 8/1/24 & Location: https://climate.ncsu.edu/fire/outlooks/

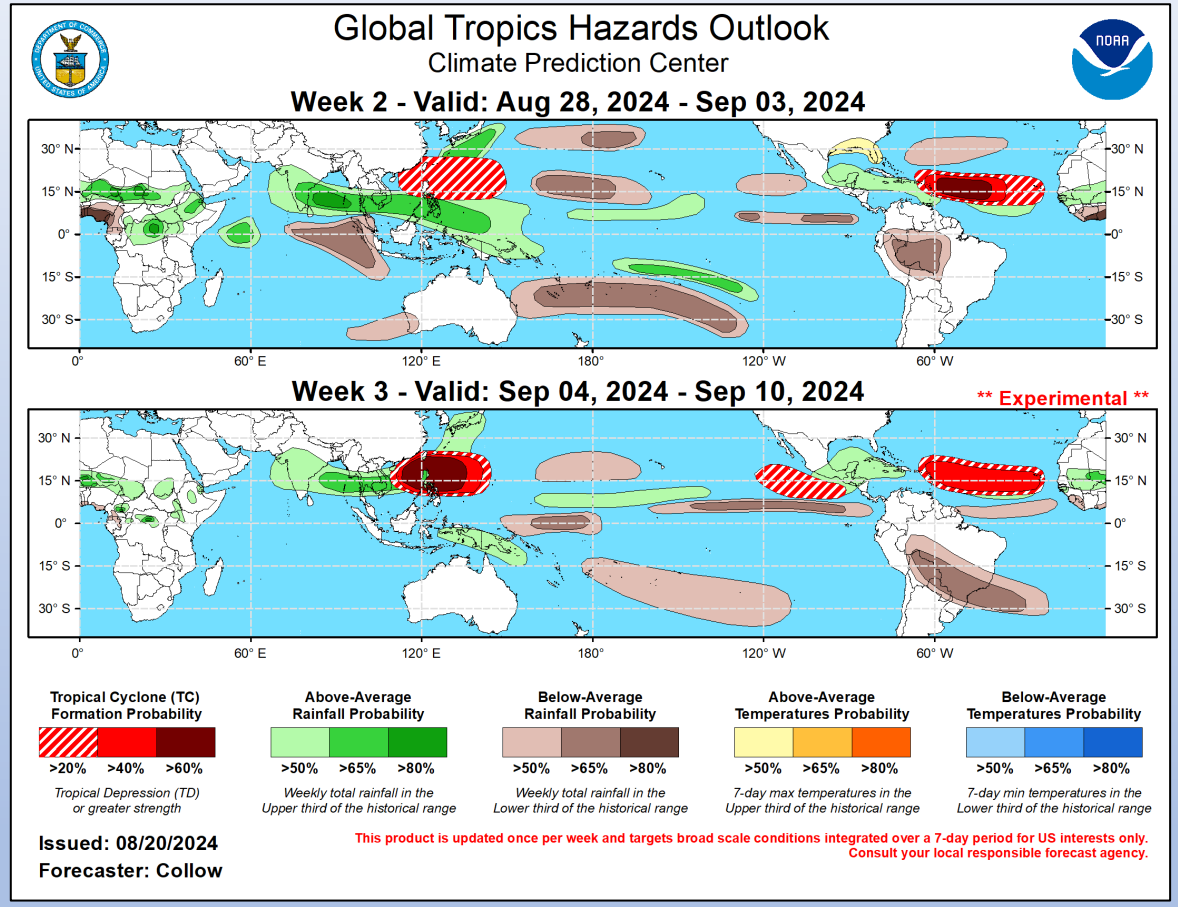


7-Day Tropical Weather Outlook



https://www.nhc.noaa.gov/gtwo.php?basin=atlc&fdays=7

Week 2 & 3: Tropics Hazards Outlook

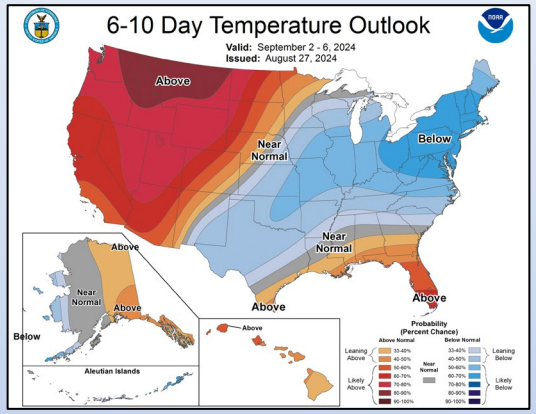


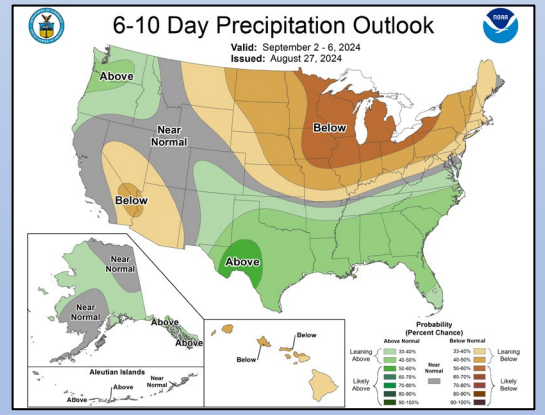
https://www.cpc.ncep.noaa.gov/products/precip/CWlink/ghaz/index.php

CPC Temp & Precip Outlook

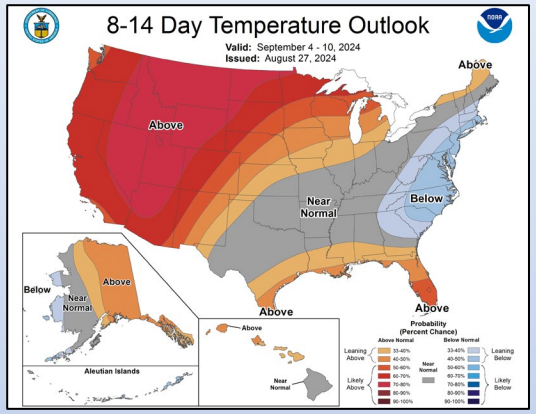
6-10 Day, 8-14 Day, Weeks 3-4, 3-Month Seasonal

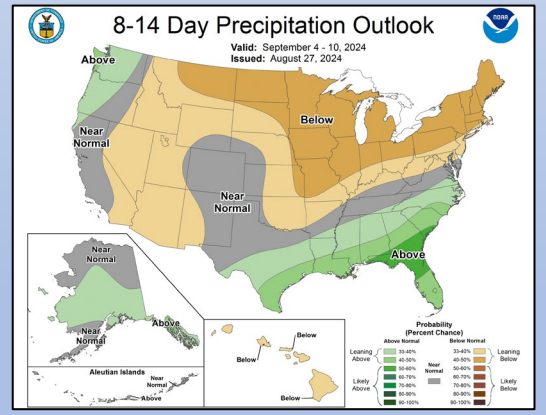
Updated 8/27/24



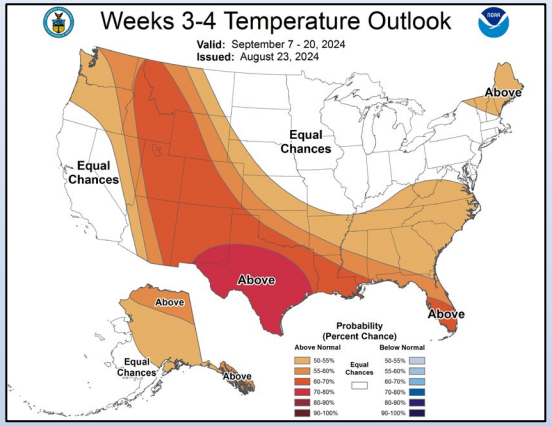


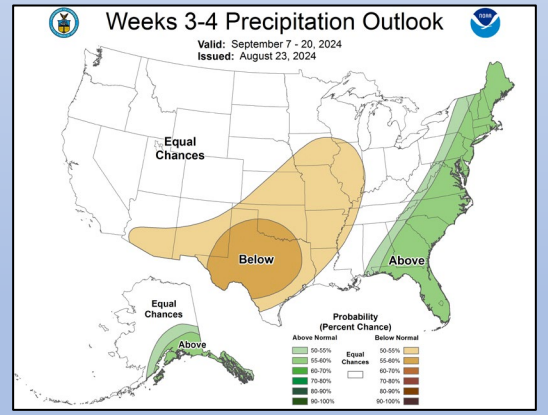
Updated 8/27/24



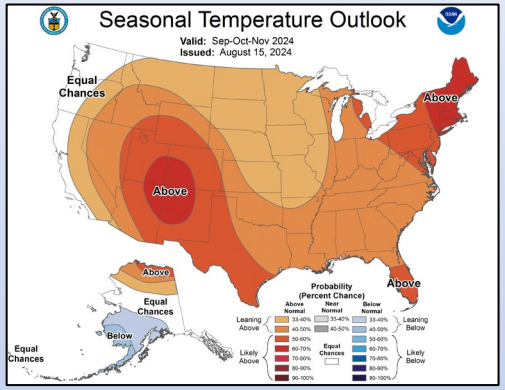


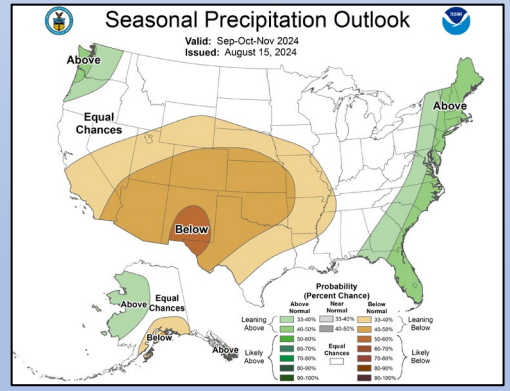
Updated 8/23/24





Updated 8/15/24 – [Discussion Link]



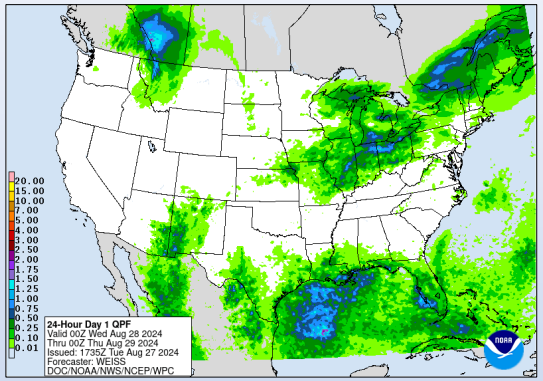


Source: https://www.cpc.ncep.noaa.gov/

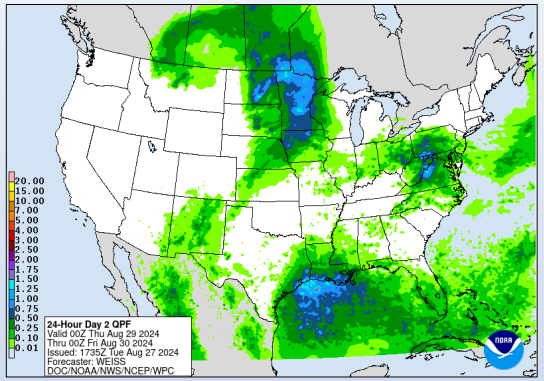
Quantitative Precipitation Forecast, 7-Day

Location: https://www.wpc.ncep.noaa.gov/#

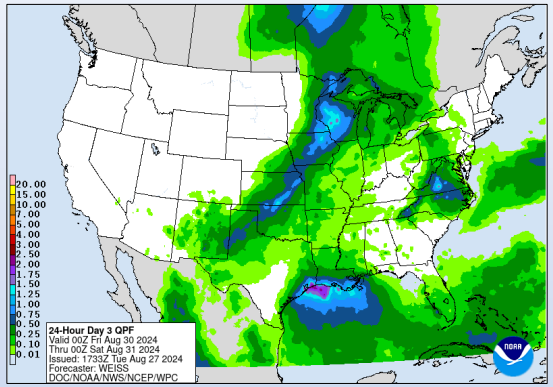
Day - 1



Day - 2



Day - 3



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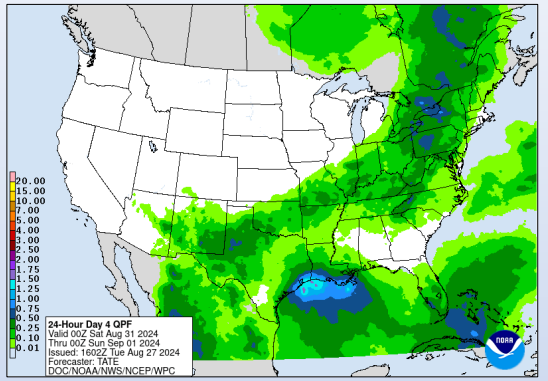
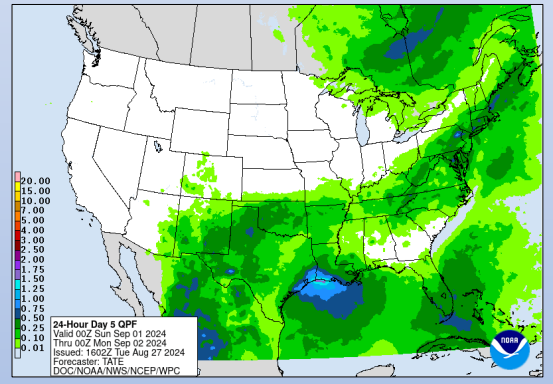
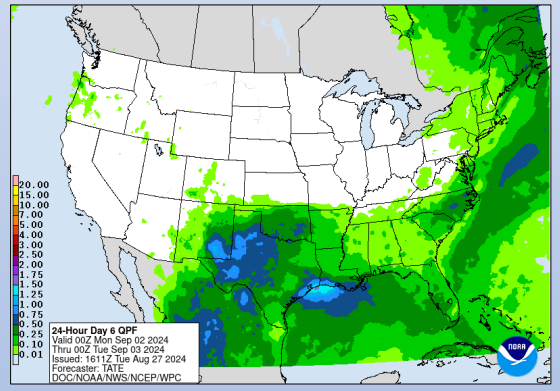


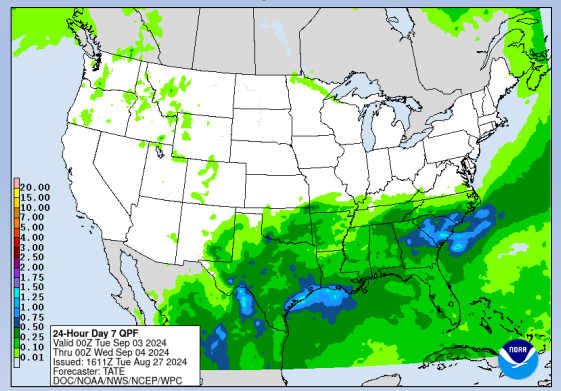
Day - 5



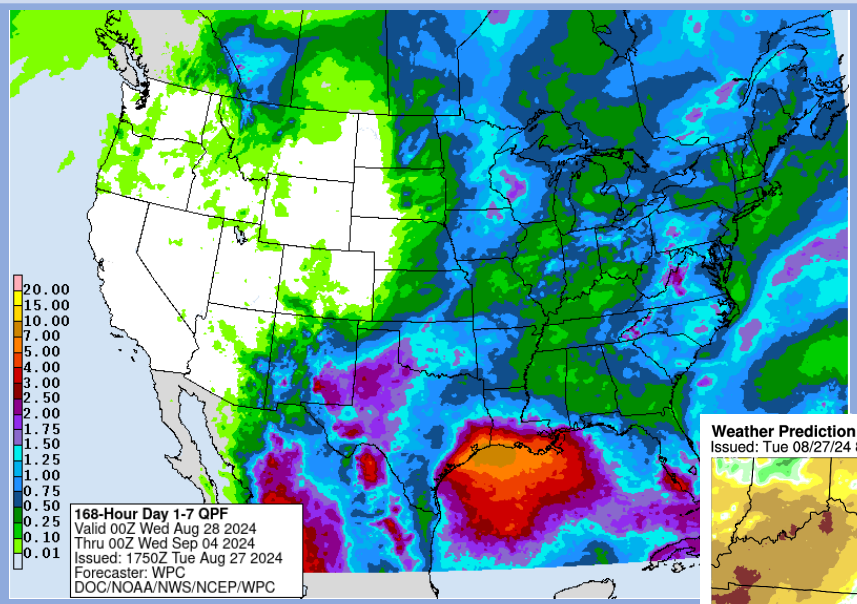
Day - 6

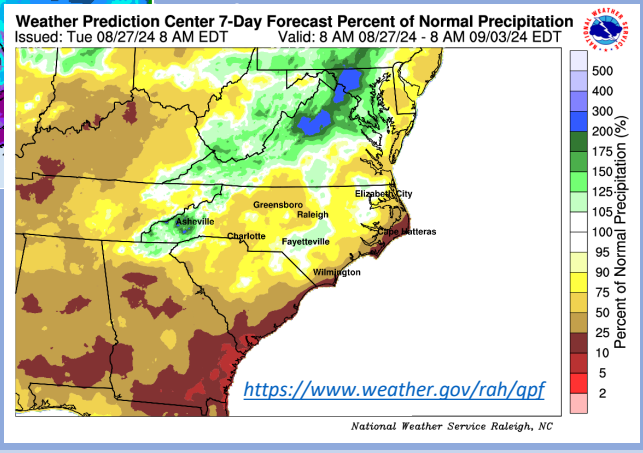


Day - 7

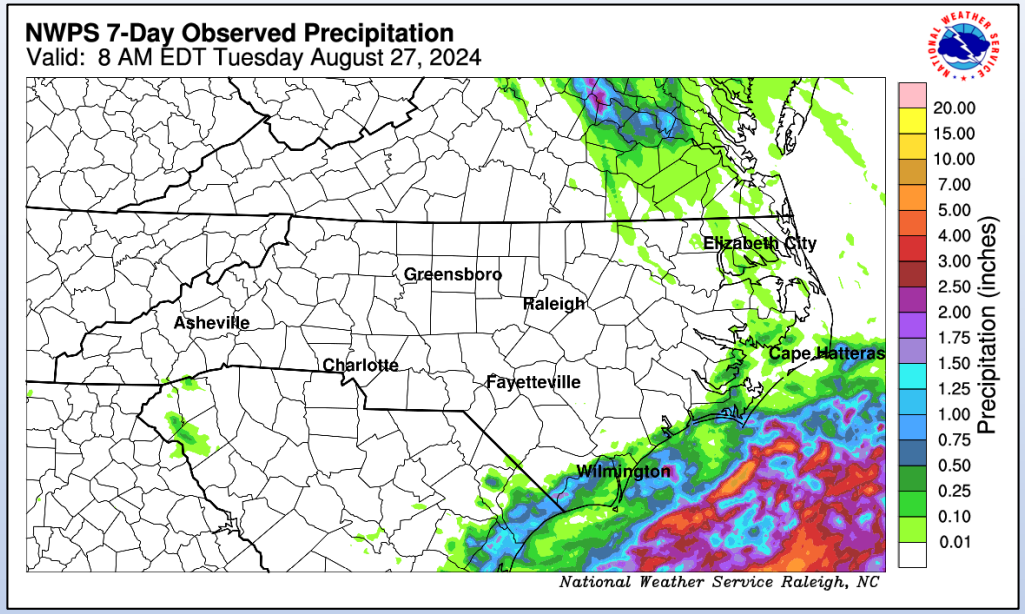


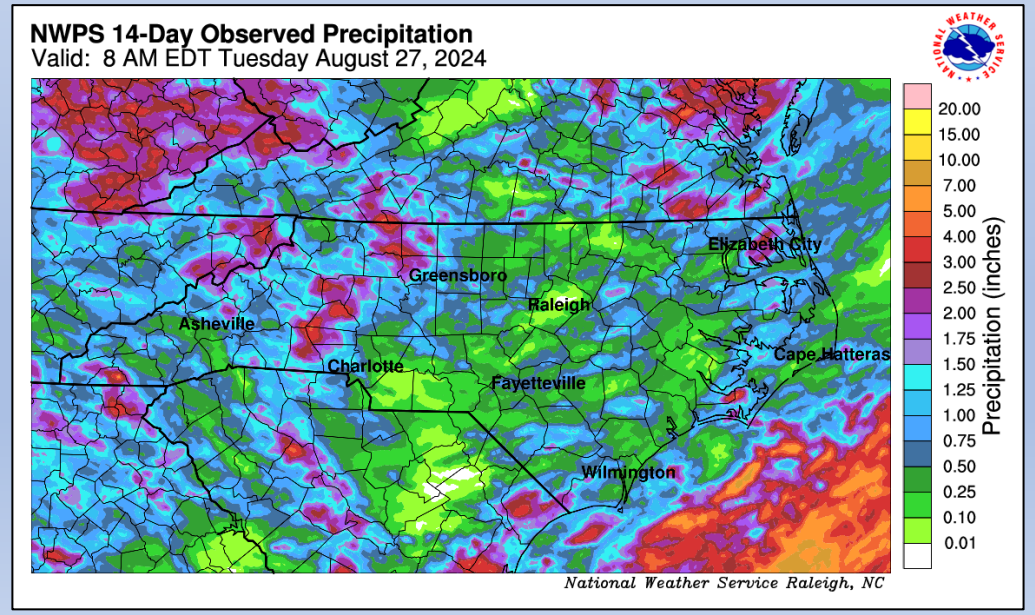
Important to note these values are subject to **significant change as weather system modeled tracks adjust farther out in time.*

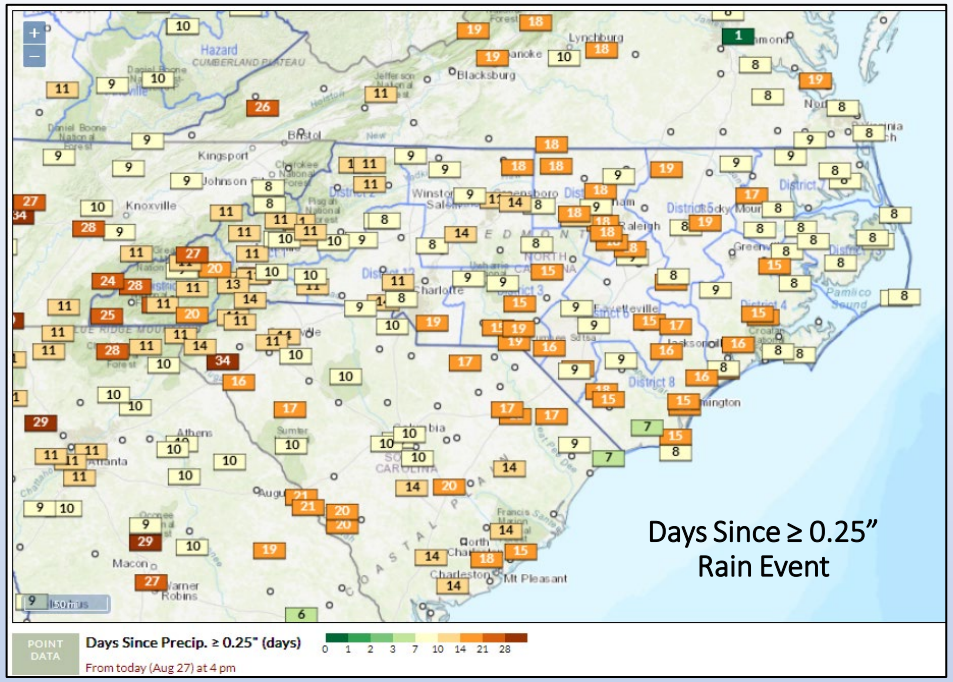


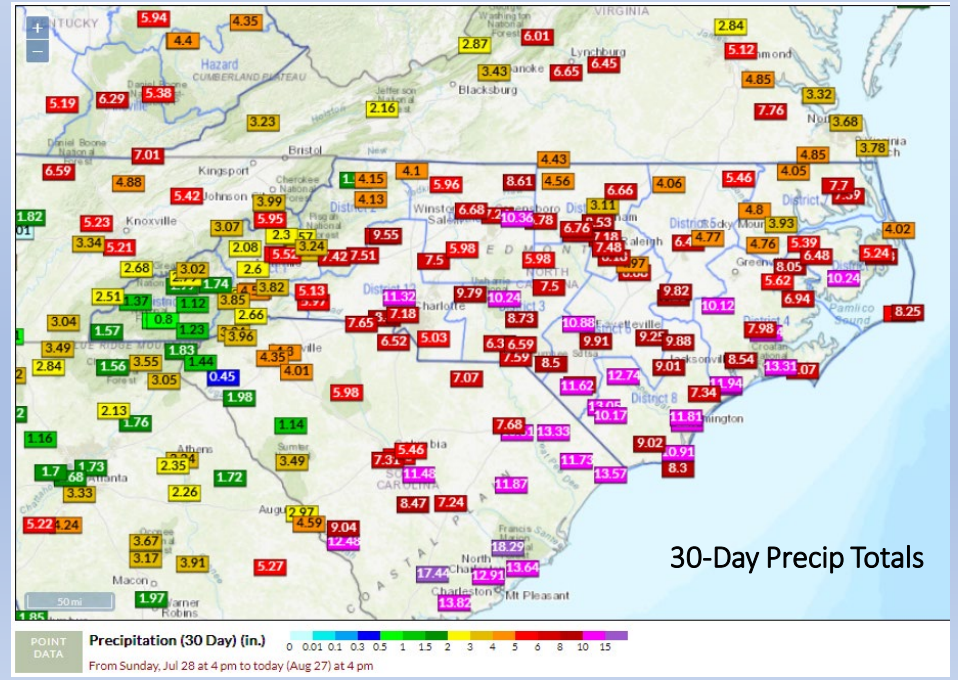


Observed Precipitation



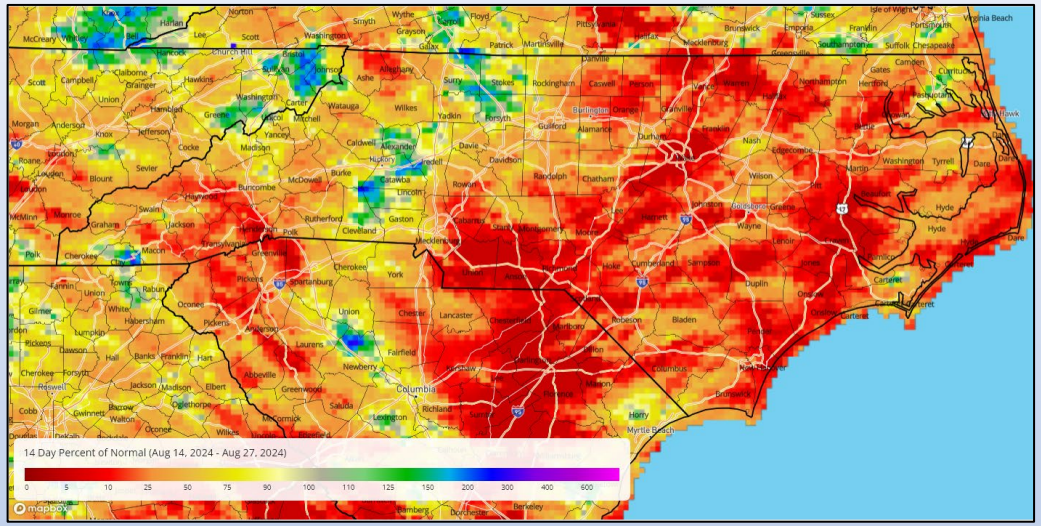




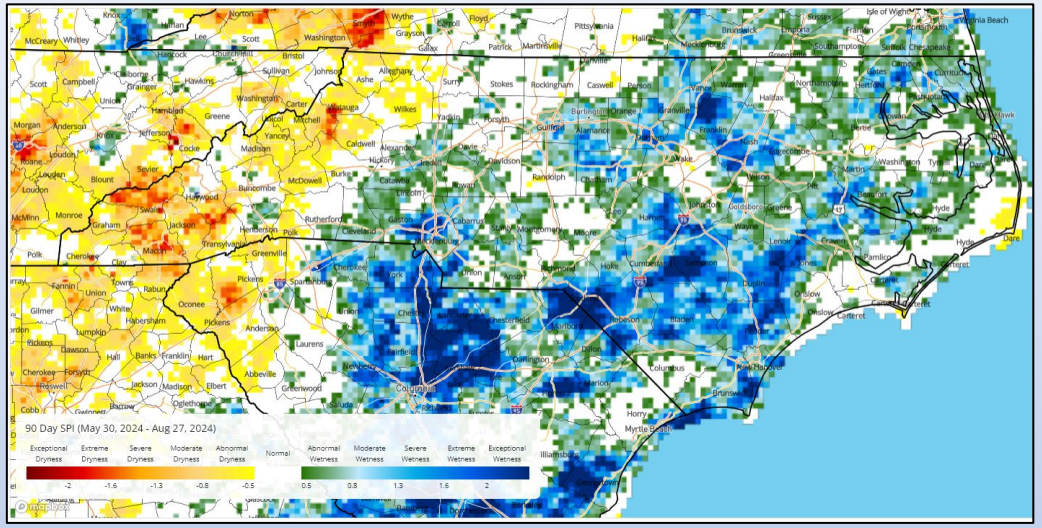


Comparing Observed Precip to 30-Yr Normals, *SRCC* *(Ending Tuesday, 8/27)*

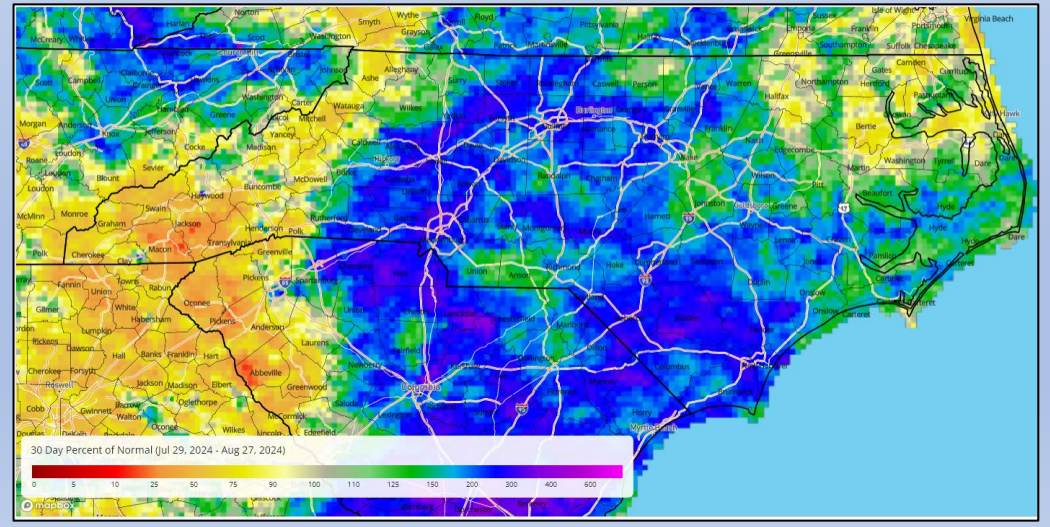
14-Day % of Normal



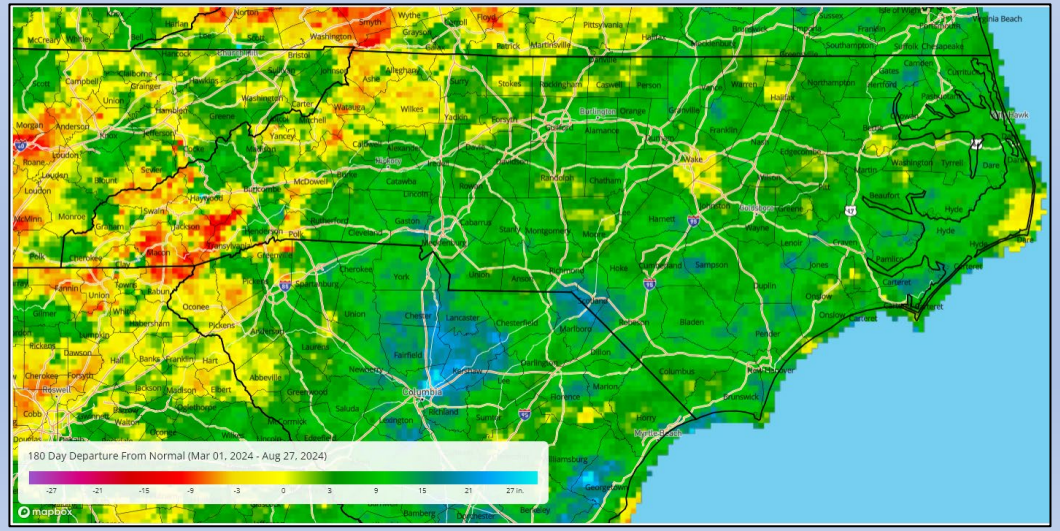
90-Day SPI



30-Day % of Normal

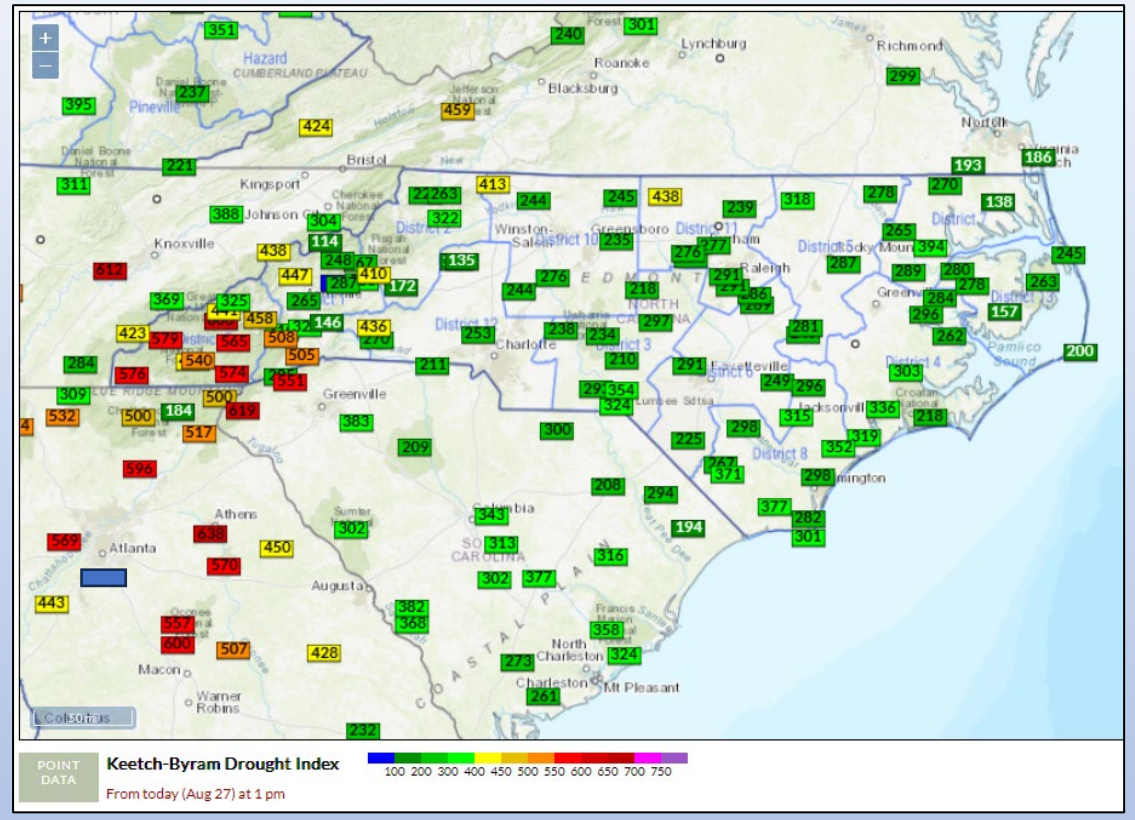


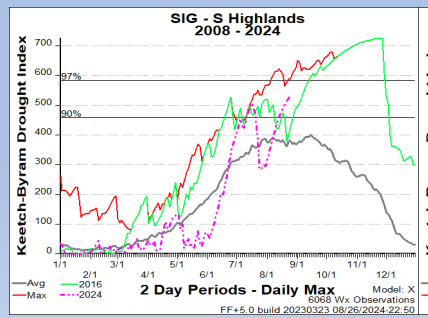
6-Month Departure from Normal (in.)

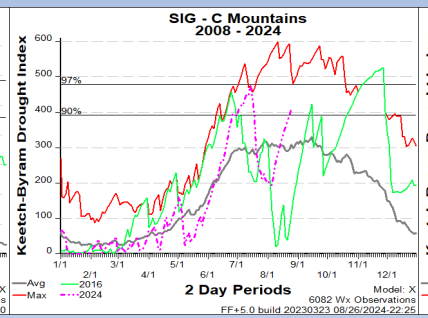


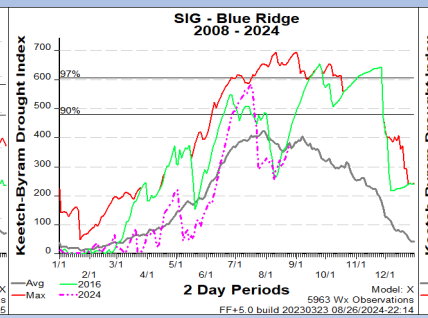
https://srcc.tamu.edu/water_portal/

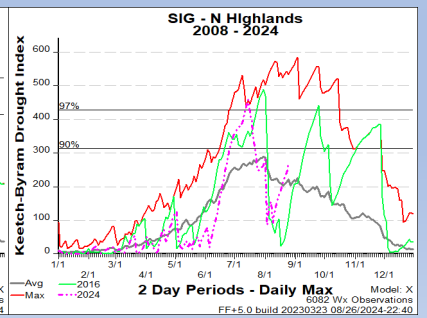
KBDI - Station Points *FWIP (Point calculation from WIMS @ 1300 on 8/26)*



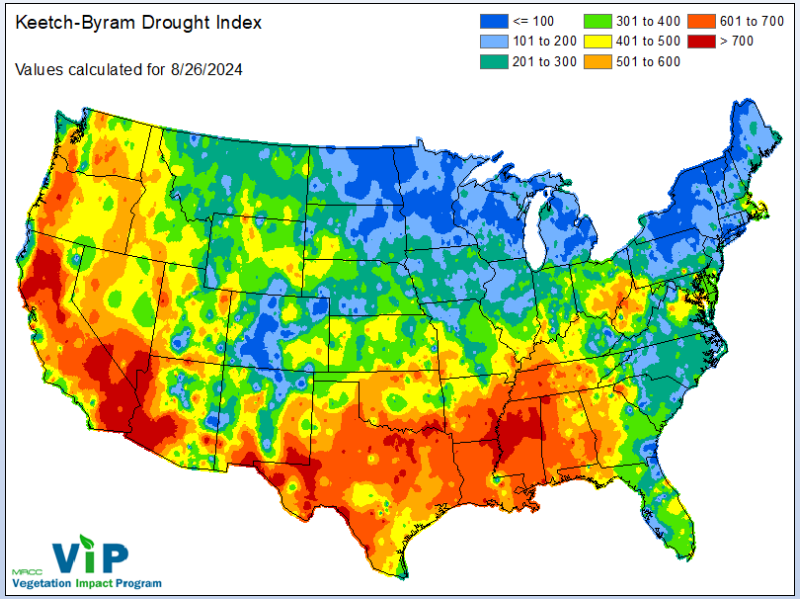


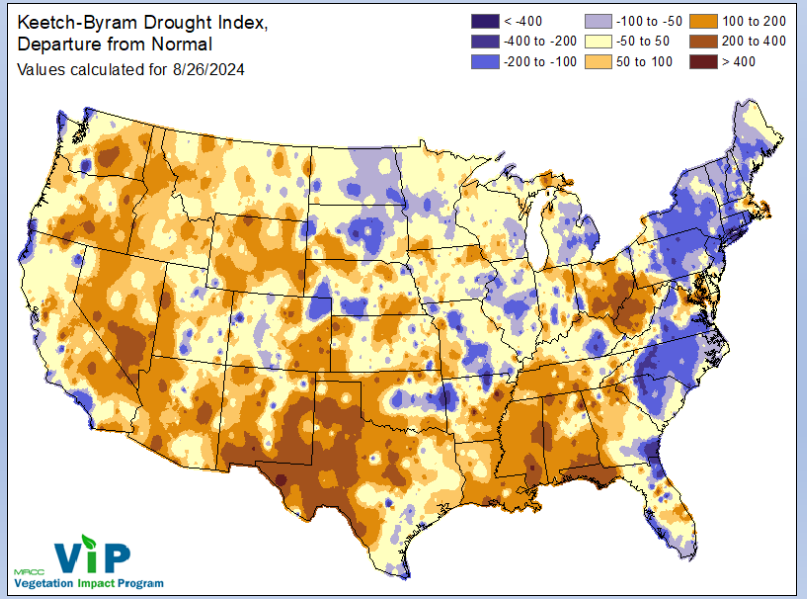






Product below is created by the Midwestern Regional Climate Center. See FAQ.





Drought Situation

North Carolina Drought Update

Created By: North Carolina Drought Management Advisory Council — www.ncdrought.org | NC CLIMATE OFFICE — climate.ncsu.edu | NC STATE — @NCSCO

For the assessment period ending **Aug. 20, 2024**

*From the US Drought Monitor, with input from the **NC DMAC***

The Main Takeaway

Rain was generally light last week, but it was enough to avoid expansion of Abnormally Dry (D0) conditions and bring localized improvements in the northern Foothills.

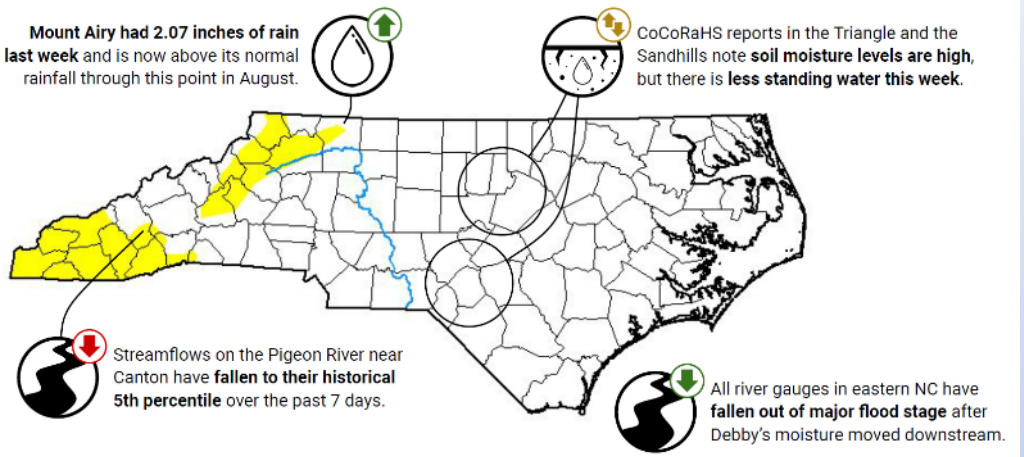
This Week's Summary

Most areas continue to have plenty of moisture in the wake of Tropical Storm Debby, and Triangle-area lakes are ramping up releases to drop closer to their targets. Meanwhile, after some areas have seen less than an inch of rain so far in August, the southern Mountains are still looking for a decent rain event or two to boost their streamflow, soil moisture, and reservoir levels.

Next Week's Outlook

Mostly sunny and dry weather should continue through this weekend, with our high temperatures steadily warming into the low 90s by Monday and Tuesday.

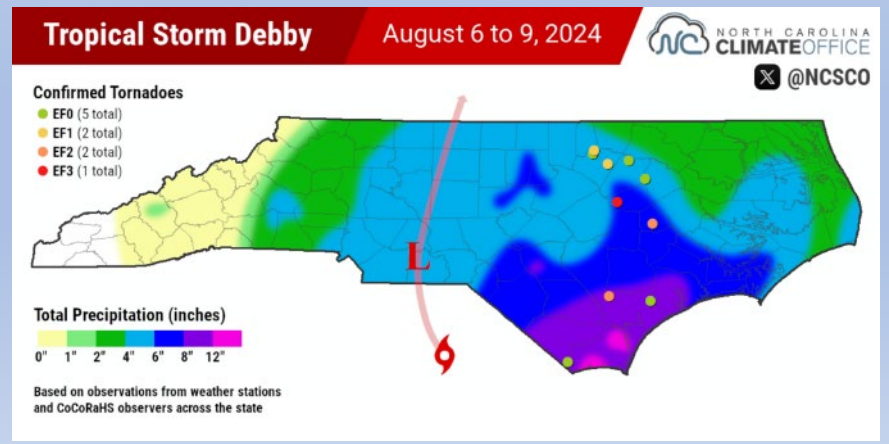
For your local drought status, visit **www.ncdrought.org**

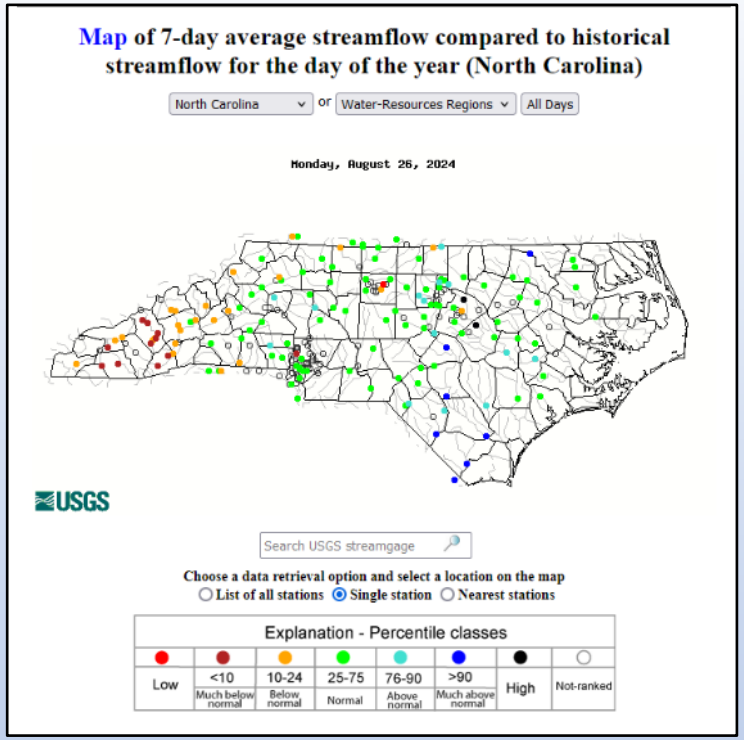


Last Week's Drought Status

Statewide Coverage by Category

Category	Current Coverage	Change Since Last Week
D0: Abnormally Dry	10.62%	-0.55%
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%



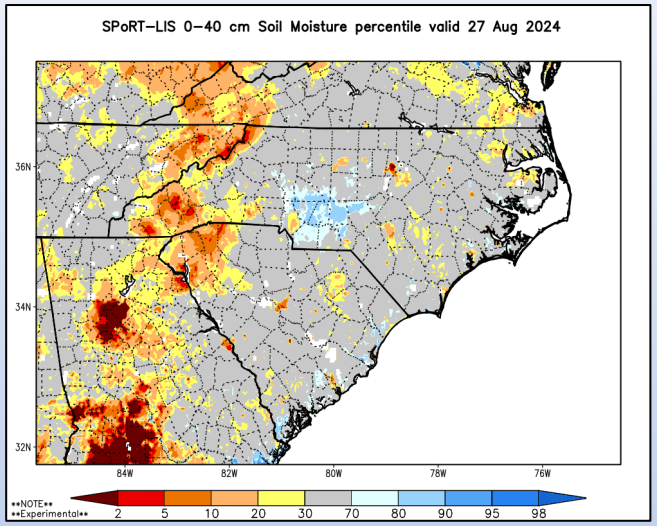


Source: https://waterwatch.usgs.gov/index.php?m=pa07d&r=nc&w=map

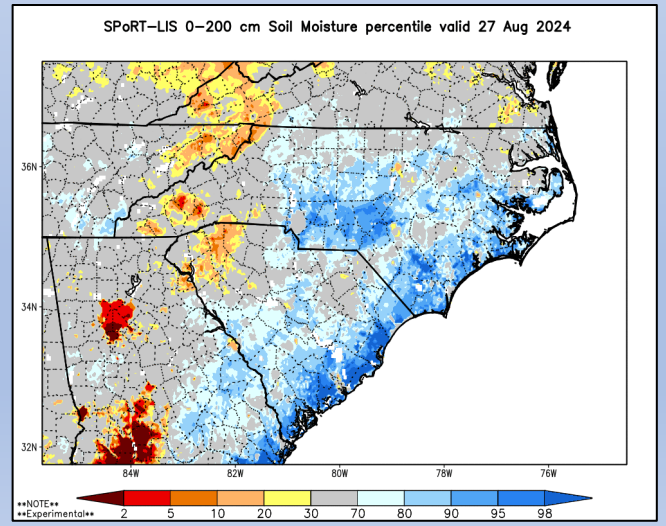
- Note continued decline in streamflow values to the west (see above).
- Rains in late July through early August contributed to a significant reduction of overall drought as compared to last month. ~11% of the state now in D0, as of last week's report (left).
- Conditions will have to be carefully monitored going into the Fall. Recent & predicted rains are very beneficial, but portions of Western NC are 6"-8"+ behind at the 6-month time scale (see Slide #42).

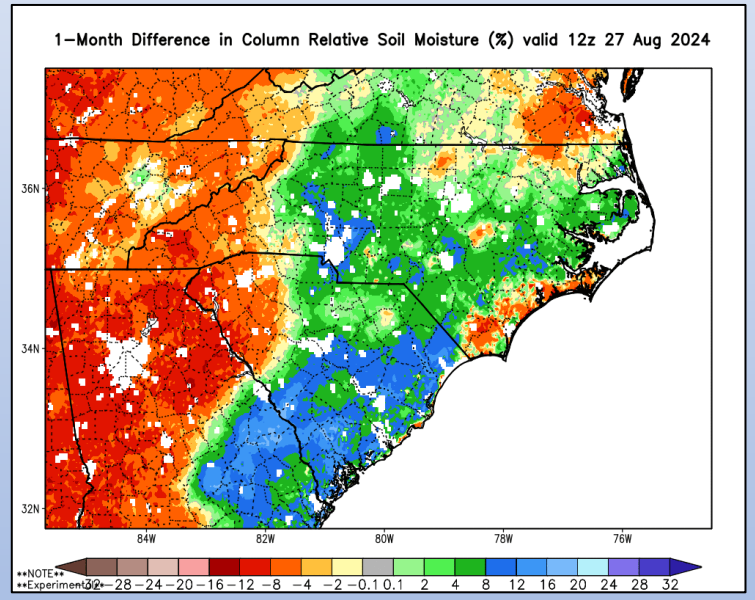
SPoRT Modeled Relative Soil Dryness

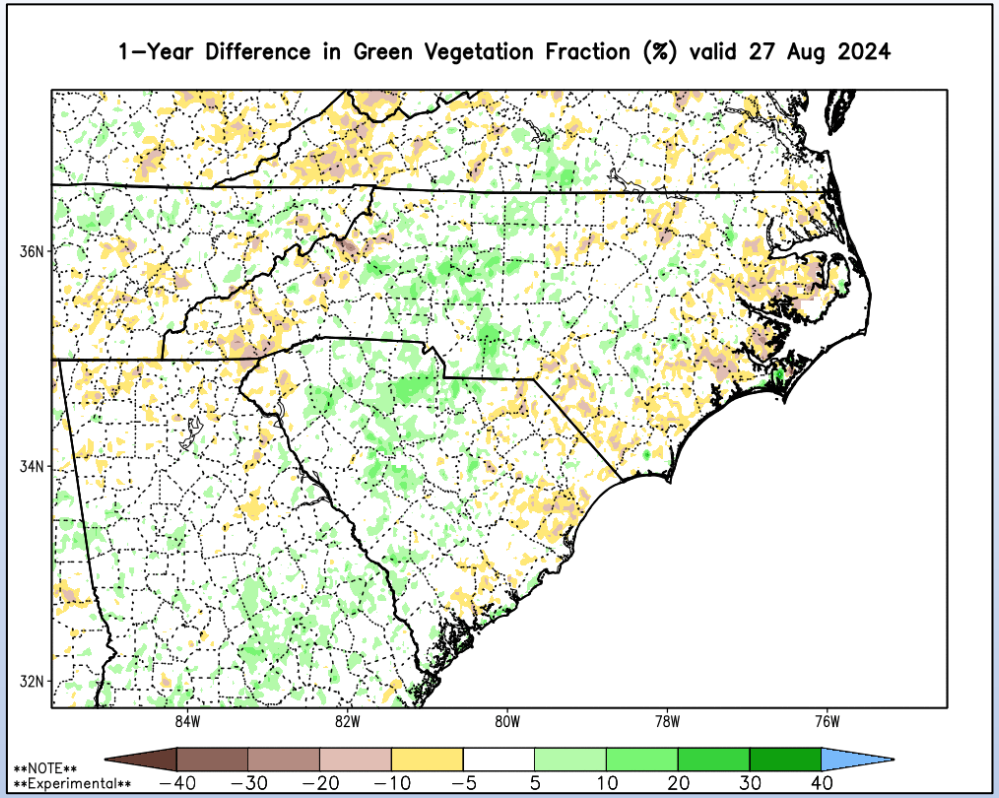
0-40 cm Depth



0-200 cm Depth





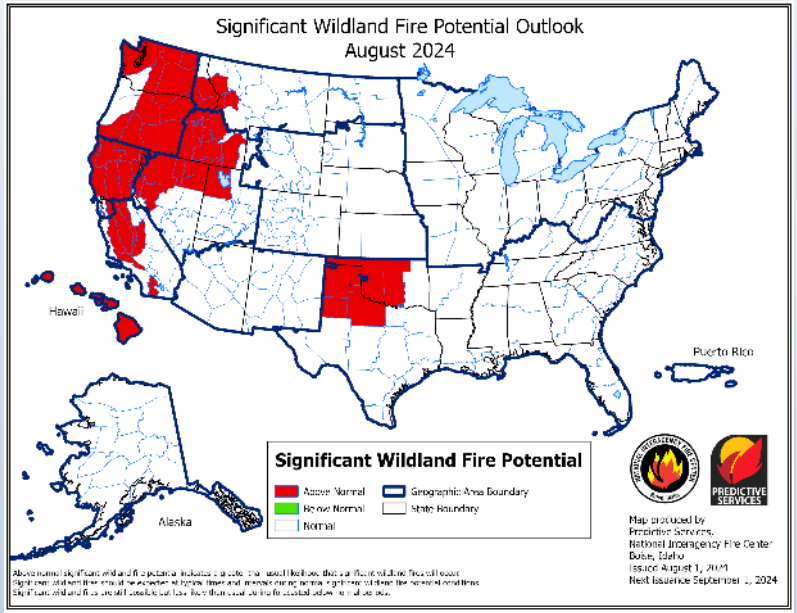


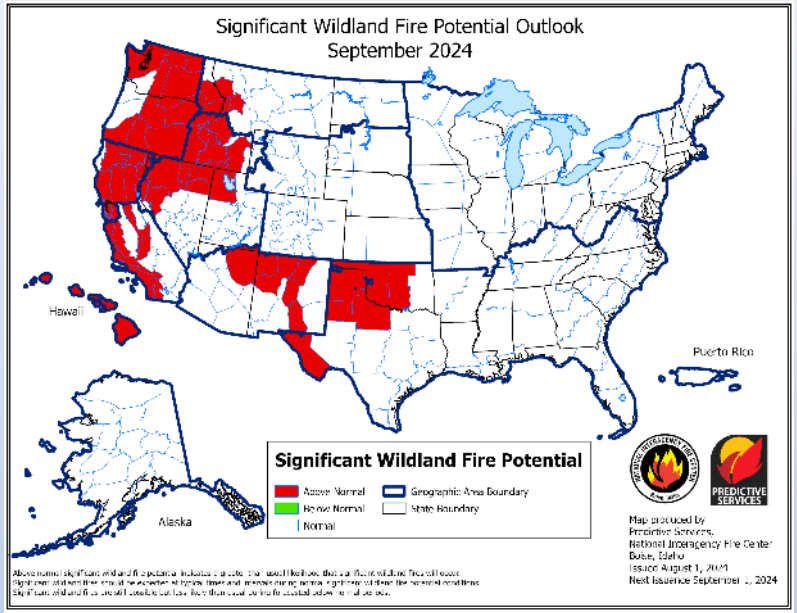
- See areas of **modeled** improvement & degradation near the surface and for the entire soil profile (left).
- The “1-Month” Difference map shows the late July & early August rain influences to the column relative soil moisture, at least short-term (center).
- The Green Vegetation “1-Year Difference” map can provide useful context for various drought impacts to the landscape, as compared to last year at this time (above). Some of this difference may also be attributed to larger scale crop-rotation and harvest schedules differences between years (corn vs beans, etc.) in the East.

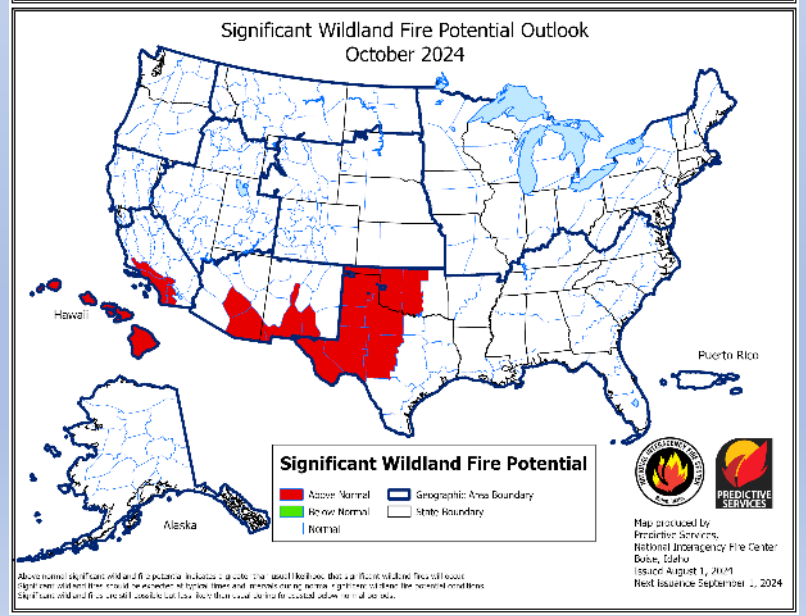
Source: https://weather.msfc.nasa.gov/sport/case_studies/lis_NC.html

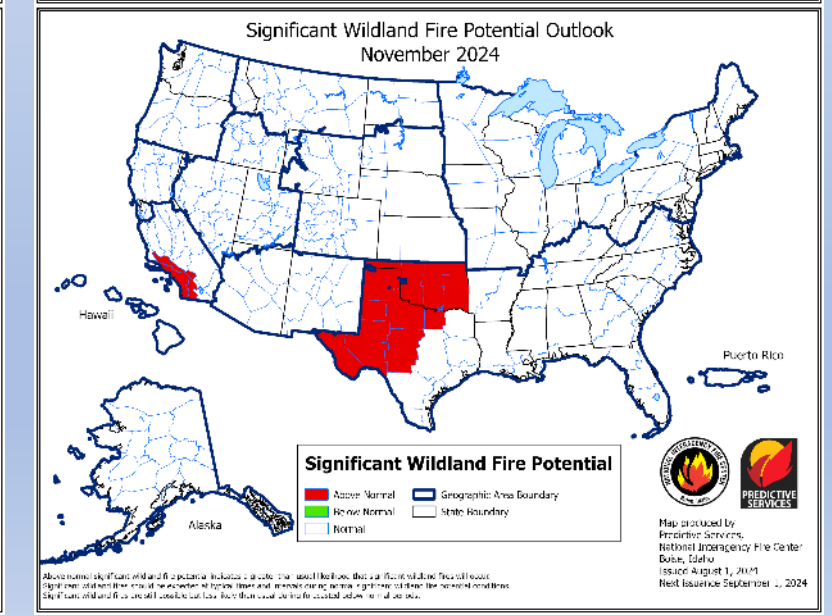
Significant Wildland Fire Potential Outlook:

Updated 8/1/24 – Next Update on 9/1/24









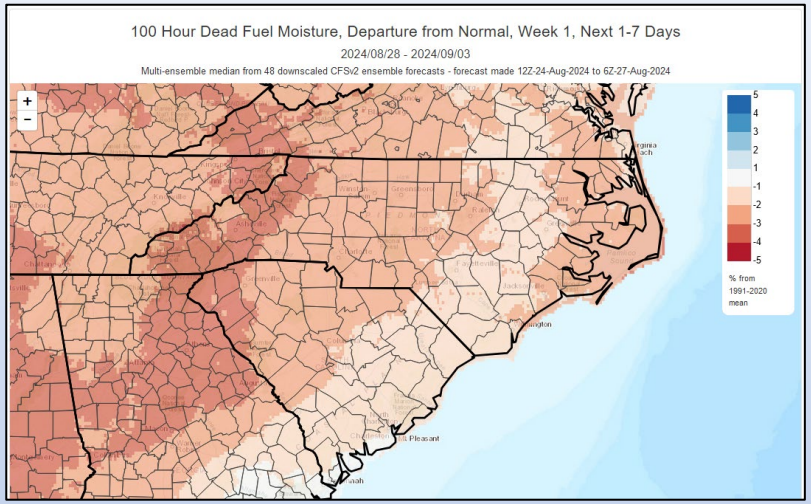
A significant fire is one that requires resources from outside the district (other than aviation). IA potential is based more on shorter term weather factors. Just a few days of dry weather can increase IA activity considerably as we have seen this year.

***Forecast uncertainty could easily lead to an expansion of "Above Normal" Fire Potential if abnormally dry conditions expand/worsen in Western NC.**

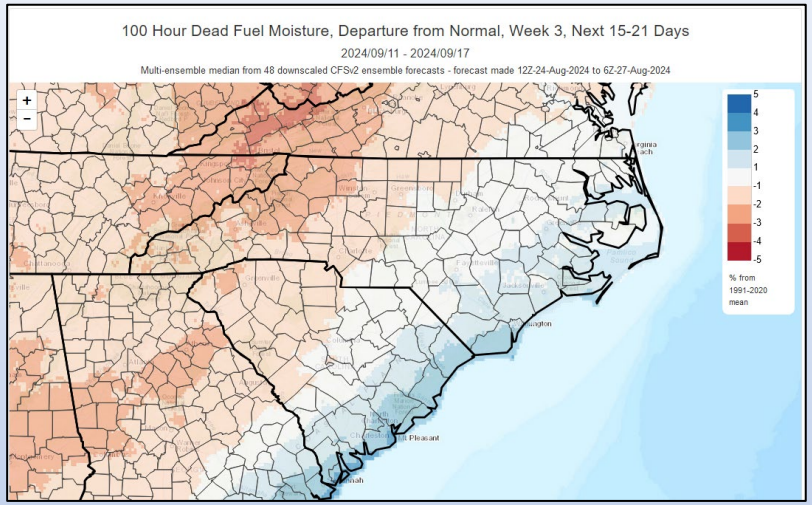
Modeled Departure from Normal by Week: 100-hr Fuels

Output relies on experimental forecast outputs and is subject to change

Week-1



Week-3

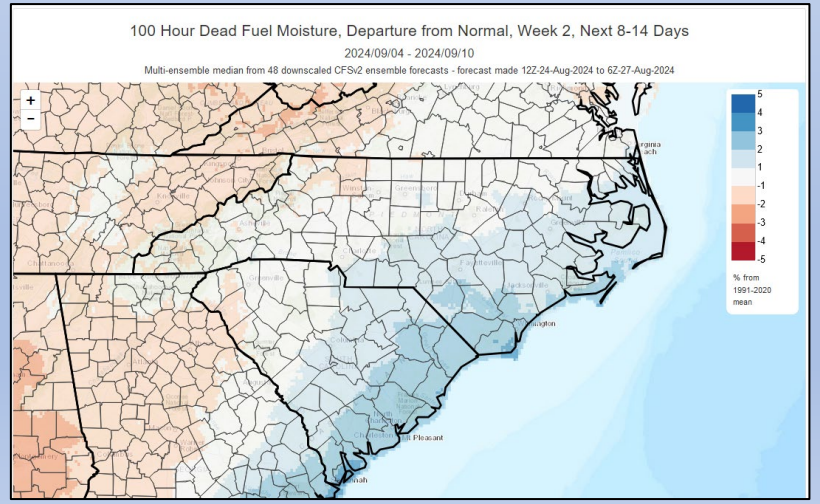


This output can provide insight into general drying trends and potential impacts to overall fire danger, especially prior to full green-up or in drought conditions. Outputs relate to interactions of warmer/colder temps, moist/dry air masses, precip amt/duration and overnight RH recovery trends.

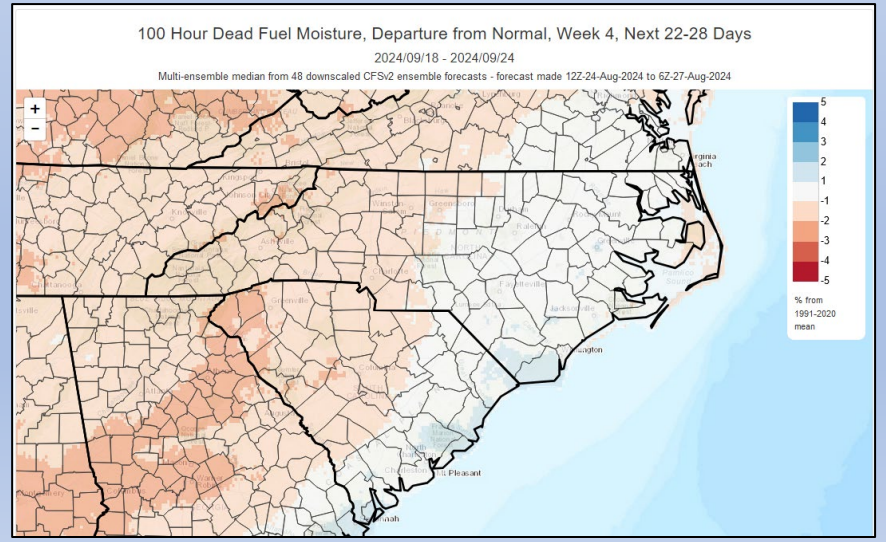
Note that <u>modeled</u> drier than normal conditions continue through Week-1 with a return of more "near normal" conditions for Weeks 2-4 in eastern parts of the state.

Important to note that there is significant forecast uncertainty as you go further out in time, especially relating to any potential tropical activity.

Week-2



Week-4



From: https://climatetoolbox.org/tool/Climate-Mapper , 100-hr Map Link