

# Statewide Seasonal Fire Danger Assessment

- June 21, 2024 Update -

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NC Forest Service*

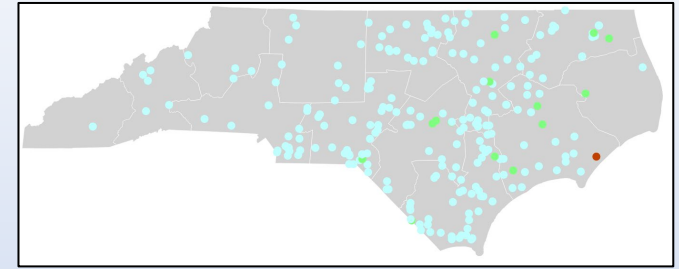
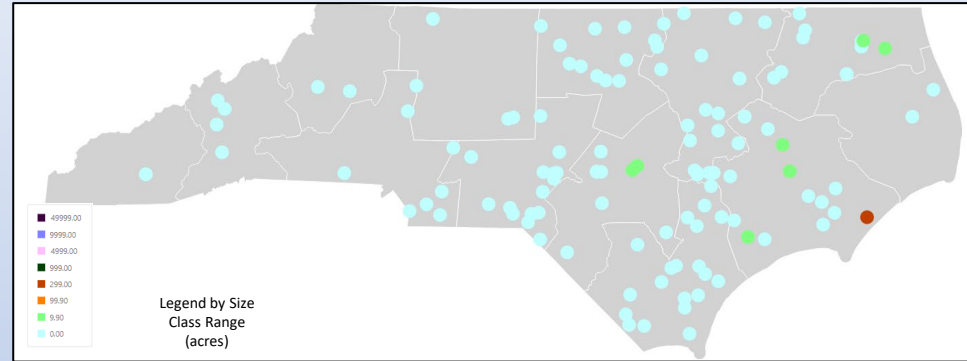
# Incident Activity

June 1 - 19

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

**7-Day Activity: 6/13 – 6/19, 2024**

Report: Business Intelligence Module, Response Trends Map



**January:** 10-yr avg is 305 fires for 511 acres  
**February:** 10-yr avg is 553 fires for 1,427 acres  
**March:** 10-yr avg is 914 fires for 4,214 acres  
**April:** 10-yr avg is 655 fires for 3,219 acres  
**May:** 10-yr avg is 303 fires for 1,118 acres  
**\*June:** 10-yr avg is 203 fires for 790 acres  
*(Statewide averages, above, are based on FARS 2013-2022 Data)*

Largest incidents Last 7 Days (Ending 6/19):  
\*from fiResponse & preliminary reporting only\*

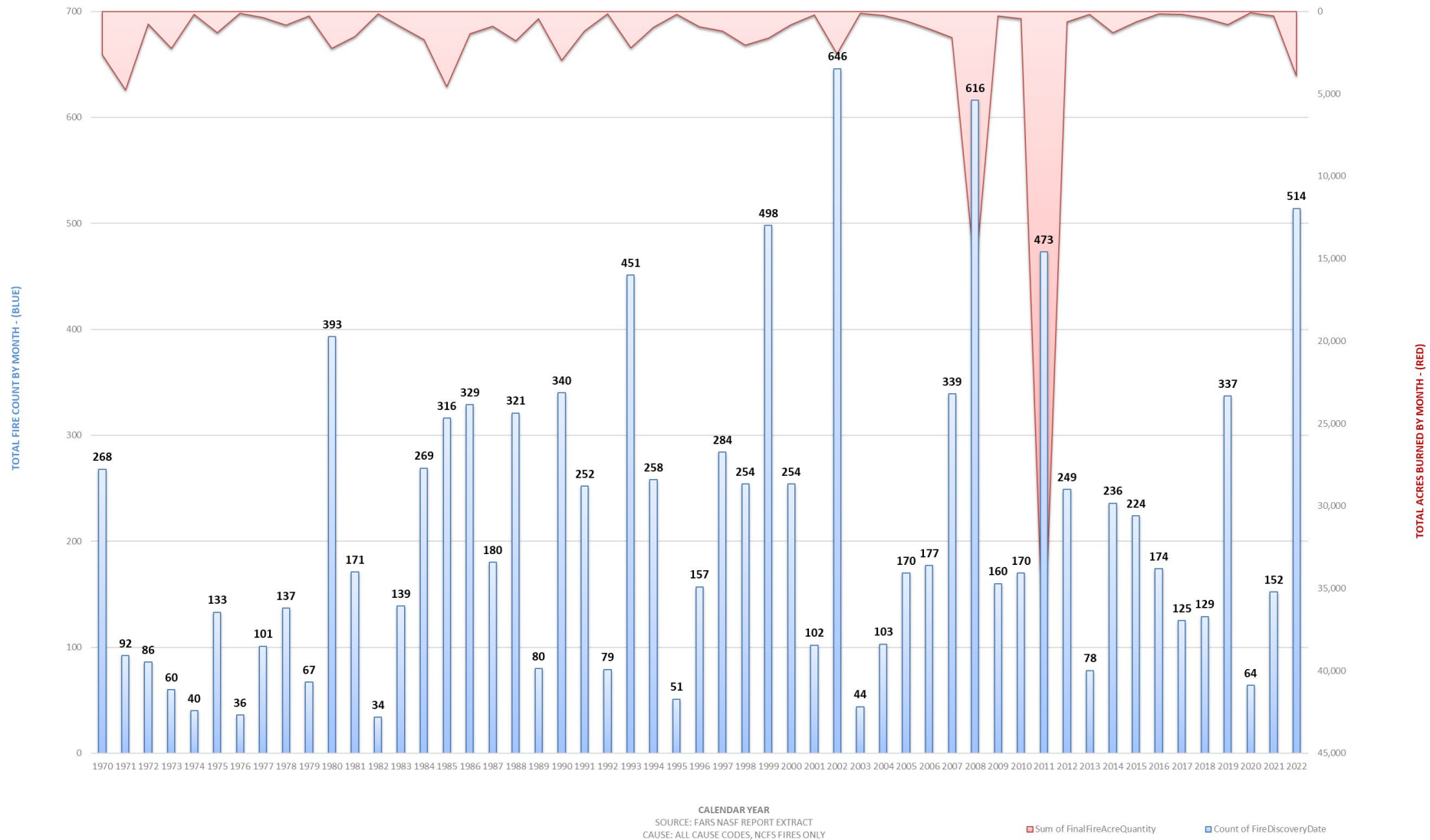
NCFS – By Region				
MTD Fire Activity (Does Not Include Federal Ownerships)				
Data Source:	Signal 14 Regional Activity Summary Report (Signal 14 is a daily snapshot in time)			
Date Range:	6/1 – 6/19, 2024			
Area	Wildfire Count	Wildfire Acres	RX Count (State & Private)	RX Acres (State & Private)
R1	94	877	0	0
R2	103	197.1	8	2,095
R3	16	13	0	0

Incident Name	Discovery Date	Region	District	County	Acres
Morris Marina Road	6/16/2024	Region 1	District 4	Carteret County	545.00
Hudnell Road	6/16/2024	Region 1	District 4	Craven County	87.00
Pasquotank County - Cherry Glade Road	6/19/2024	Region 1	District 7	Pasquotank County	60.00
Pasquotank County - Toxey Road	6/17/2024	Region 1	District 7	Pasquotank County	50.00
Old Maplehurst Rd	6/18/2024	Region 1	District 4	Onslow County	35.00
Double deuce	6/13/2024	Region 2	District 5	Halifax County	22.00
Wheat field #1	6/18/2024	Region 1	District 4	Beaufort County	15.00
Pope Rd.	6/18/2024	Region 2	District 6	Harnett County	11.00
Pallet Mill	6/18/2024	Region 2	District 6	Sampson County	10.00
Trask High School	6/16/2024	Region 1	District 8	Pender County	8.50

“209” Criteria Incidents for June - as of 6/19/24

Incident Number	Incident Name	Start Date	Location	Size	Containment / Completion Date
NC-NCS-240023	Morris Marina Road	6/16/2024	R1/D4/Carteret	545 Acres	90% Contained on 6/19/2024
NC-NCS-240024	Summer 24 Fire Support	6/18/2024	R1 Area	NA	NA

All Cause Codes - Statewide Fires in CY Month of **JUNE** (1970-2022)  
 (by discovery date)

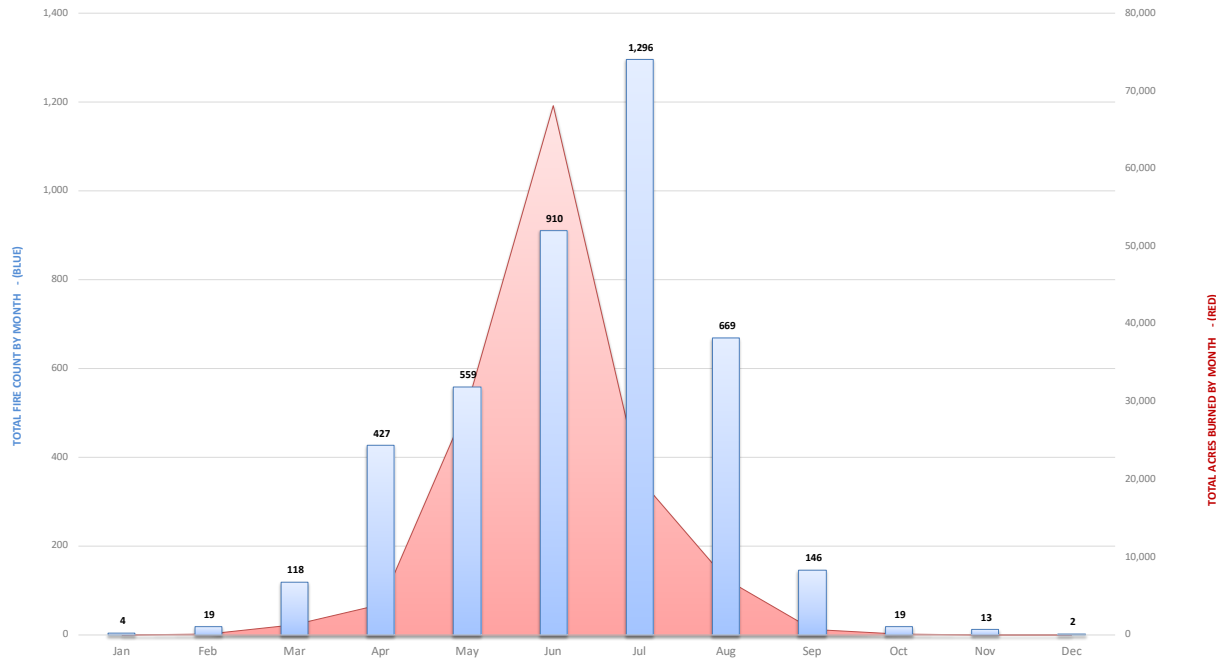


## Distribution of All Fires & Acres for JUNE from 1970 - 2022

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

# Distribution of Lightning Fires & Acres by Month from 1970 - 2022

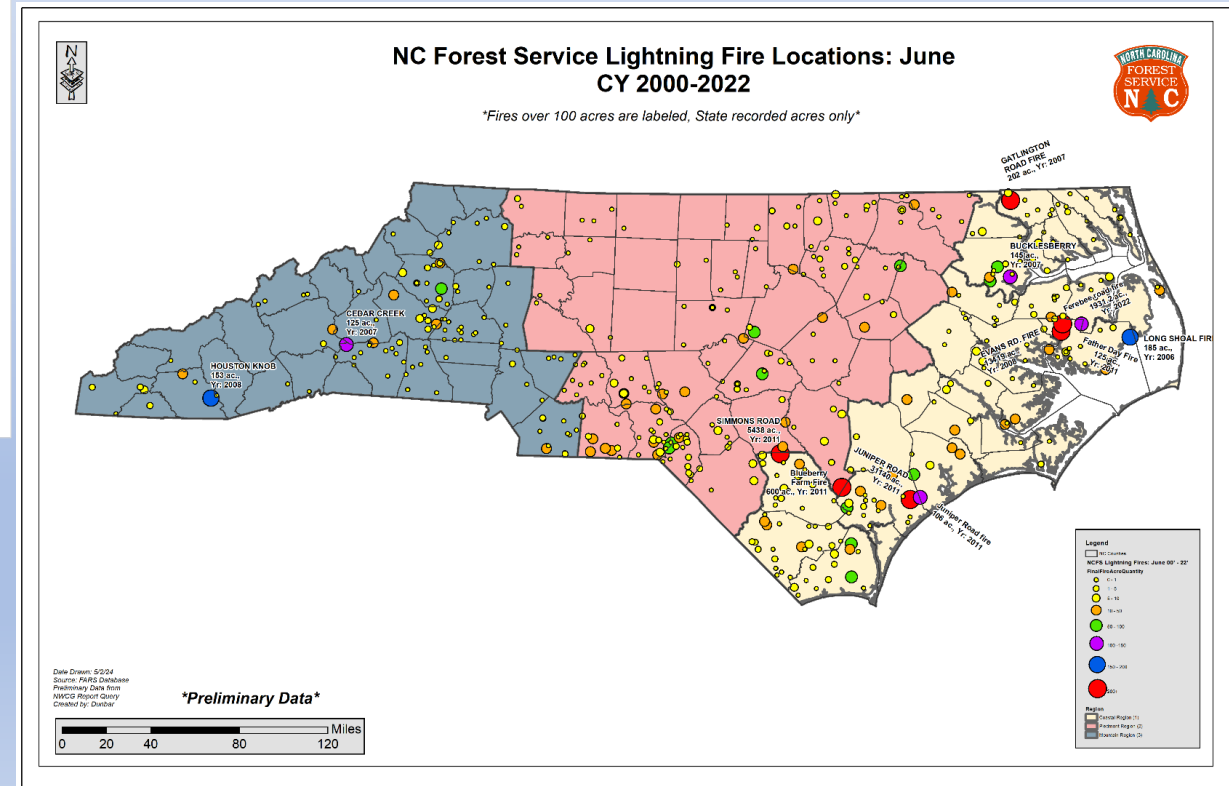
Cause Code 1 (Lightning) - Statewide Fires and Acres by CY Month (1970-2022)  
(by discovery date)



Cause: Cause Code 1, Statewide, NCFs Reported Fires Only

CY MONTH  
SOURCE: FARS NARS REPORT EXTRACT  
CAUSE: ALL CAUSE CODES, NCFs FIRES ONLY

Sum of Final FireAcreQuantity Count of FireDiscoveryDate



# Southern Area Daily Outlook Page:

## SACC Daily Outlook

Friday, June 21, 2024

### Watches, Warnings and Advisories

- No Red Flag Warnings or Fire Weather Watches
- **Heat Advisory** in northeast KY through Saturday evening
- **Excessive Heat Watch** for northern and central VA on Saturday
- **Coastal Flood Warnings and Advisories** continue along the western and middle Gulf Coast

### Today's Weather Outlook

- Moisture from the remnants of TS Alberto will bring showers and thunderstorms to portions of southern and western TX, where locally heavy rain is possible
- A tropical disturbance off the Southeast Coast will approach the GA-FL border later today; moisture is limited, but locally heavy downpours and some gusty winds will be possible
- Isolated pop-up storms could affect the Appalachians, where an otherwise hot and dry day will be the rule
- Above normal temperatures will be common in central and eastern areas, while clouds will keep readings a bit milder than normal over most of TX

### 30-Day Percent of Normal Rainfall

- Increasing drought is evident in the eastern states, from central FL through GA, the Carolinas and VA – drier than normal conditions extend west into portions of the Appalachians and Mississippi Valley, though conditions are mixed
- Abnormally dry conditions are also found in portions of OK, with a few spots of <25% of normal rainfall the past 30 days in central parts of the state
- West TX remains drier than normal except on a widely scattered basis
- Wet conditions have impacted South FL, large parts of TX into LA and southern AR, the OK panhandle and areas near the KY/TN border
- Rainfall has been highly variable across the Caribbean the past 30 days

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

## SACC Daily Outlook

Friday, June 21, 2024

### Significant Fire Potential Outlook Today

- Dry and hot conditions will increase today from central and southern AL into the FL panhandle, GA and the Carolinas; moderate risk PSAs generally have ERC-V values near or above the 50th percentile, with lower values in the low risk PSAs; RH in these areas will fall to as low as 25-30%, perhaps locally lower; gusty winds will develop this afternoon either with sea breezes or with the circulation moving on shore in the Jacksonville area
- Winds will be lighter over most of the FL peninsula today, while spotty showers and storms could result in a few new ignitions, mainly in northern parts of the state
- Dry conditions and near-record heat could bring an increase in IA across parts of VA and KY

### Significant Fire Potential Outlook Saturday

- Highs in the 90s to near 100 will be common in the southeastern coastal plain Saturday, with RH outside the influence of the tropical disturbance expected to be as low as 25-30%; winds will be light in most areas, except where outflow boundaries move in from nearby thunderstorms
- The rest of the Southeast into the Appalachians will see hot and dry conditions, as well, but fuels should be less receptive in the low risk PSAs
- Increasingly hot and dry weather will impact western and central OK, where SW winds are forecast to gust as high as 25-35 mph; RH should not be any lower than 30%

### Significant Fire Potential Outlook Sunday

- Moderate Risk PSAs will continue to see abnormally hot and dry conditions Sunday, but SW winds will be on the increase across VA and NC ahead of an approaching front; expect similar RH and temperatures to Saturday, but winds will gust from 20-30 mph (highest in KY, VA, and NC)
- Sea breezes may produce scattered thunderstorms over northern FL into coastal AL and MS, where sea breezes will lead to an increase in winds by the afternoon; otherwise, some lightning holdovers could emerge in the region where soaking rain does not occur today into tomorrow
- Hot and dry weather will continue in western and central OK, although an approaching front could trigger isolated storms in the afternoon

National 7-Day Significant Fire Potential Outlook

## SACC Daily Outlook

Friday, June 21, 2024

### 10-Hour Fuels

- 10-hour dead fuel moisture is forecast to decrease over the Appalachians and most of the Southeast through the middle of next week, but a few areas may benefit from scattered thunderstorms Monday, with another round of rain possible later Wednesday or Thursday
- Current forecasts bring 10FM down to or below the 3<sup>rd</sup> percentile in parts of VA and to near the 10<sup>th</sup> percentile in adjacent portions of KY, NC and SC
- 10-hour fuel moisture is expected to decrease across OK through the next week, with local areas of improvement possible where spotty storms occur
- 10FM has increased substantially in South TX and West TX, and another shot of tropical moisture will move into the region over the weekend

### 100-Hour Fuel Moisture Anomalies the Next Two Weeks

- 100-hour fuel moisture will be well below normal across the Appalachian states through the week ahead, likely persisting into the week two period in areas that miss out on scattered rainfall
- The entire northern tier of the region is forecast to see below normal 100FM on average through the first few days of July
- 100-hour fuel moisture is forecast to increase and remain above normal for this time of year across the southern tier, especially over the FL peninsula and in South TX

### U.S. Drought Monitor Update

- This week's drought monitor shows substantial changes from last week's update
- Two-category improvements occurred due to last week's flooding rain in South FL, while little change occurred in central parts of the state
- Widespread increases in abnormal dryness were the rule from north FL into the eastern states, with moderate drought noted now in parts of north MS, AL and GA, in addition to eastern SC and the mountains of VA
- Abnormal dryness and drought increased in western OK and portions of the TX panhandle
- PR and the USVI remain drought-free

North Carolina State University Fire Weather Intelligence Portal

## SACC Daily Outlook

Friday, June 21, 2024

### Forecast Rainfall the Next Week

- A tropical disturbance moving towards northeast FL today will produce local rainfall amounts through the weekend of 3-6", while daily thunderstorms will increase elsewhere in the state through the week ahead
- Another system following in Alberto's footsteps will produce some heavy rain over Deep South TX, where some 1-3" amounts are possible
- Rainfall elsewhere in the region will be more scattered, generally focused with a passing front late Sunday or Monday, and ahead of another front towards the middle or end of next week – actual rainfall may differ considerably from what is forecast due to nebulous forcing

### 7-Day Tropical Outlook

- Low pressure approaching the Southeast coast still has a 50% chance of becoming a short-lived tropical depression or weak tropical storm prior to moving inland later today; rainfall with this system will be limited, but some flash flooding is possible in northeast FL and southeast GA this weekend
- A disturbance currently over the Yucatan Peninsula has a 60% chance of becoming a tropical cyclone the next few days as it takes a similar track to Alberto
- Impacts along the western Gulf Coast will be more limited than with Alberto, but some localized coastal flooding and flash flooding will be possible in South TX
- The Caribbean should be monitored towards the middle and end of next week for low pressure development; if any development occurs, it looks to remain well south of PR and the USVI

### Preliminary July Outlook

- NOAA's preliminary July outlook is depicted
- Persistent heat looks to be the main story across the eastern states, with very high confidence in hotter-than-normal conditions in the Appalachians and Carolinas
- Confidence in above normal temperatures is a bit lower across most of TX into the western parts of the Mississippi Valley, while the High Plains should also see a very hot month
- The Gulf Coast and portions of the Eastern Seaboard are favored to see above normal rainfall; however, model guidance is mixed in some of these areas, and the end-of-month update may change considerably
- Dry weather is favored through the northern tier of the region, especially over KY

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 (6/20 Outlook shown)

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

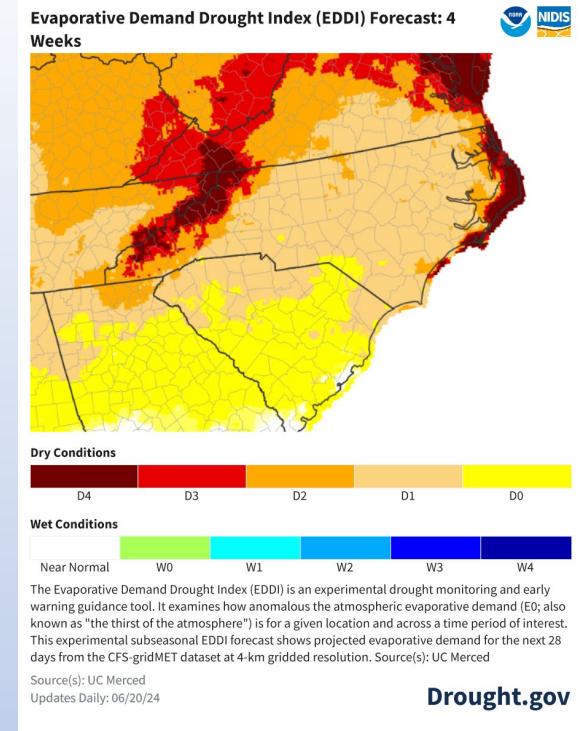
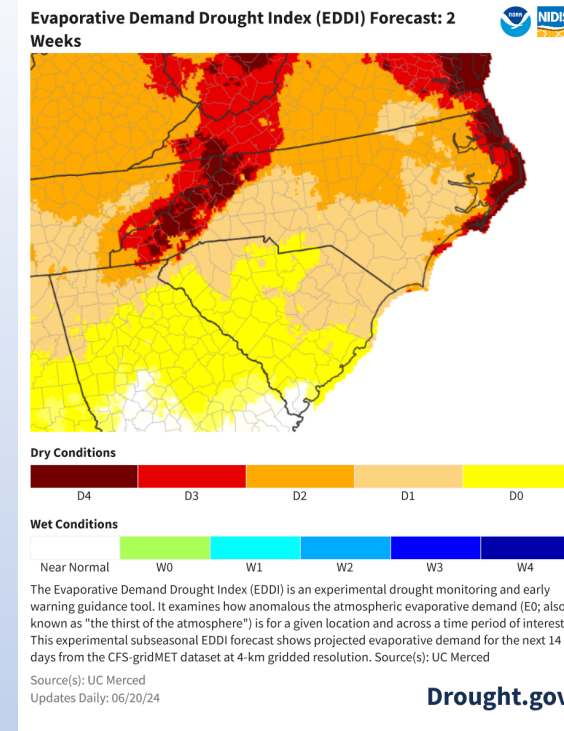
## Summer Heat & Rainfall Deficits - Impacts to Observed Fire Behavior -

\*Drought development has continued in portions of the state over the past month, as noted in the latest release of the USDM on 6/20/24. Abnormally high air temperatures + the lack of rain have helped created high evaporative demand for forest, crop and yard vegetation – rapidly drying shallow soil horizons, duff and organic soils (especially those in pattern drainage).

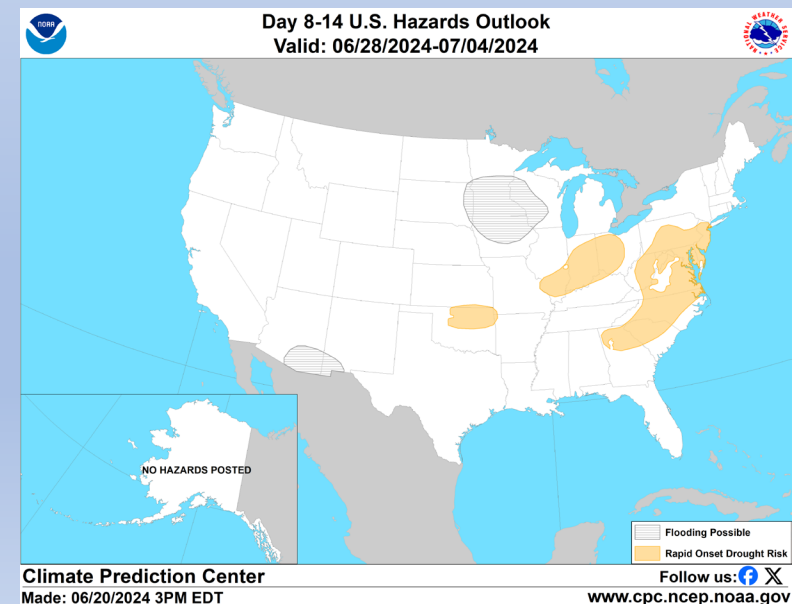
Live fuels in the hardest hit areas (much of Southeastern NC) have reached low enough fuel moistures that they are available for consumption & add to fire intensity. Additional reports from the D-4 & D-8 areas show active consumption of organics down to mineral soil – requiring extensive mop-up and post-containment monitoring.

The EDDI Maps at the top right illustrate modeled evaporative demand at the two-week and four-week level – showing continued high evaporative demand.

The **CPC** has now included portions of the Southeast, including much of NC falling with risk for “Rapid Onset Drought” – also known as flash drought. See hazards discussion from the CPC [here](#).



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



# Regional Comments – R1

**D4 & D8 Area:** Fire activity has steadily increased moving into Mid-June, as evaporative demands & abnormally warm conditions have also increased. Wildfires have shown increasing resistance to control due to organic & live fuel consumption. Typical fires are burning entirely down to mineral soil. Reburn potential is significant due to lingering smoldering material and buildup of needle cast. Lethal temperatures are more easily reached even with lower intensity fires on hot days coupled with low plant available moisture – contributing to needle/leaf drop.

An example fire from Duplin County is shown at the right. In this case 8” of organic material was consumed in about two days.

Nearly all contained fires are requiring enhanced mop-up, water shuttling and frequent monitoring.

**D7 & D13 Area:** Fire activity has been low overall compared with D4 & D8. However, the potential for significant occurrence continues to build, should lighting or other ignition sources create occurrence in areas with deep duff or true organic soils.

Water levels continue to decline throughout the area, especially evident in timberland blocks reliant on pattern drainage. Surficial aquifer monitoring wells at Elizabeth City & Hoke (near Plymouth) are nearing or below the 10<sup>th</sup> percentile for June.

----- Overall -----  
KBDI, modeled dead and live fuel moisture levels are all indicating steady progression of dryness, nearing record dryness for the period (see FF+ slides).

Lightning starts have been minimal due to lack of storm activity. If precip chances increase for pop-up storms – be mindful of holdover ignitions due to very dry duff and dead fuels.



D8/Duplin/6-20-24 Mop-Up:  
Note complete consumption of organic layer

### Regional Comments:

- Continued drying trend.
- Eastern D6 is extremely Dry KBDI Values from 500-567+
- D3 KBDI Values from 435-500+ in Sandhills
- D5 has KBDI values from 388-550+
  
- 100-hr fuel moistures have been at/near the 3rd percentile (low percentiles mean extremely dry) for Eastern D6 and parts of D5. Near 10th percentile (low percentiles mean extremely dry) for Eastern Piedmont.
  
- Green fuel Woody and Herbaceous Fuel Moistures have dropped during this drying trend to very low levels. These green fuel are now available for consumption and are adding to the fire intensity.
  
- Mop up is critical. 2-week-old fires are still smoldering and creeping.



# 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>

### 6/20/24 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
<b>Southern Highlands</b>	3	2024-06-20	39.80 66.6%	22.33 68.8%	5.60 78.2%	13.03 63.4%	249.67	11.91 31.5%	18.28 50.6%	18.23 31.0%	20.84 63.0%	167.40	144.67	80.7°F	54.3%	SSW 2.3 mph	0.00 in.	0.0
<b>Central Mountains</b>	3	2024-06-20	21.33 32.0%	16.10 46.2%	2.87 51.9%	4.47 21.8%	320.33	12.55 46.9%	18.02 51.4%	18.72 49.8%	20.51 68.1%	250.00	200.00	81.7°F	50.7%	E 3.7 mph	0.00 in.	0.0
<b>Northern Highlands</b>	2	2024-06-20	26.25 47.0%	14.20 47.0%	3.10 58.1%	8.35 49.9%	210.50	13.37 37.9%	17.78 49.9%	18.65 49.9%	21.18 66.8%	250.00	200.00	77.0°F	58.5%	ESE 3.0 mph	0.00 in.	0.0
<b>Blue Ridge Escarpment</b>	3	2024-06-20	45.70 61.3%	30.67 70.1%	6.57 67.2%	12.60 56.0%	356.67	11.29 37.1%	17.39 46.9%	18.14 34.2%	18.68 35.2%	170.80	146.33	83.7°F	51.3%	SE 1.3 mph	0.00 in.	0.0
<b>Western Piedmont</b>	3	2024-06-20	39.93 51.8%	26.77 56.2%	6.37 57.2%	11.00 49.0%	414.00	10.91 43.9%	16.80 58.2%	16.71 33.5%	18.41 34.3%	161.40	137.67	87.3°F	44.3%	ESE 4.3 mph	0.00 in.	0.0
<b>Sandhills</b>	3	2024-06-20	40.33 60.2%	42.73 56.8%	11.43 64.7%	7.50 80.2%	464.00	10.39 32.4%	18.60 68.3%	17.19 25.7%	18.63 47.7%	150.60	133.33	89.3°F	38.3%	ESE 5.7 mph	0.00 in.	0.0
<b>Eastern Piedmont</b>	4	2024-06-20	58.75 30.3%	28.40 32.2%	7.60 53.7%	23.58 33.2%	405.75	11.95 51.1%	18.34 61.5%	16.79 22.6%	18.27 16.7%	126.10	120.25	85.5°F	45.3%	ESE 4.3 mph	0.00 in.	0.0
<b>Southern Coastal</b>	7	2024-06-20	65.43 52.9%	44.14 68.9%	9.96 76.8%	18.67 43.6%	615.29	10.12 22.6%	16.33 38.7%	16.26 3.3%	18.40 16.7%	102.17	137.86	88.7°F	42.7%	E 5.0 mph	0.00 in.	0.0
<b>Northern Coastal</b>	4	2024-06-20	47.35 33.8%	31.83 46.9%	7.45 54.4%	13.43 26.9%	516.25	10.57 36.6%	15.99 46.2%	15.98 7.6%	18.09 23.3%	143.88	153.25	86.0°F	46.8%	ESE 6.8 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.



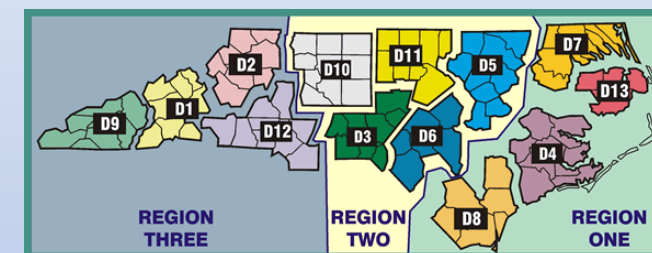
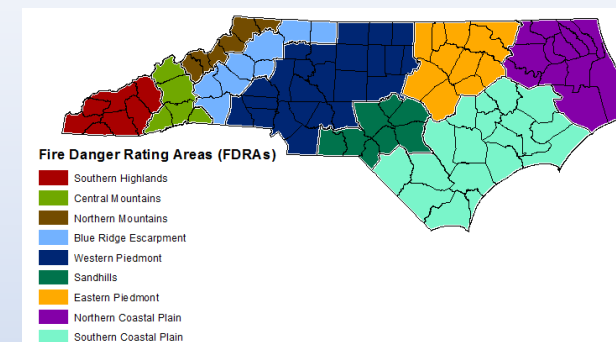
# Important notes for next slide group:

## 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:

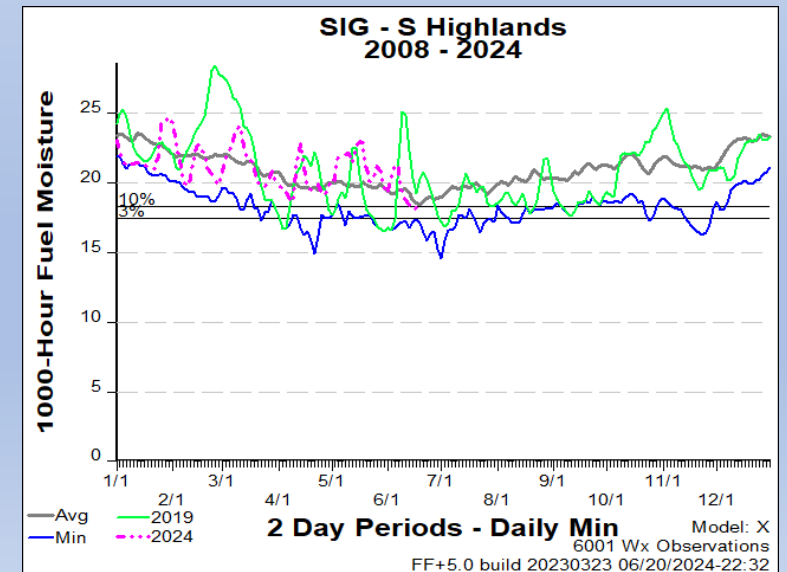
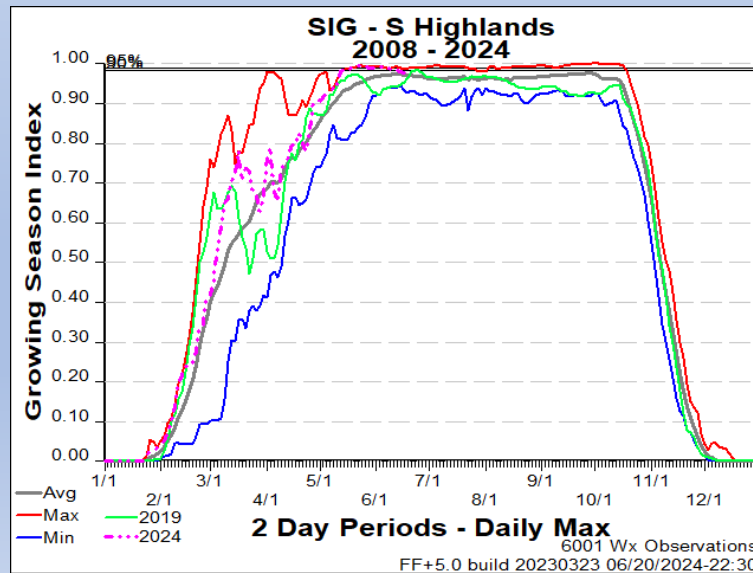
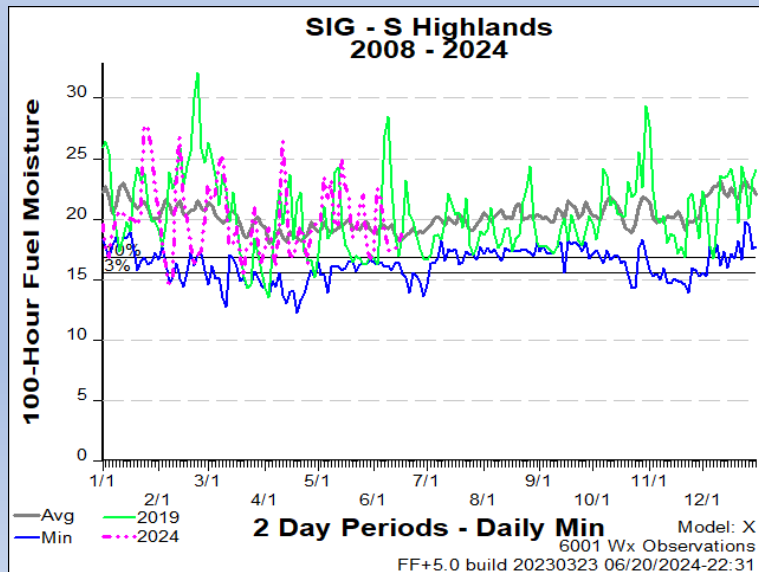
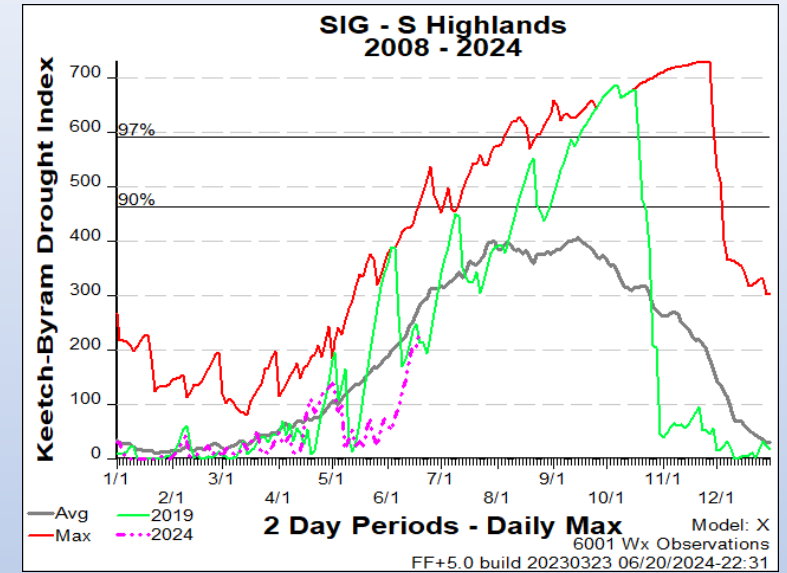
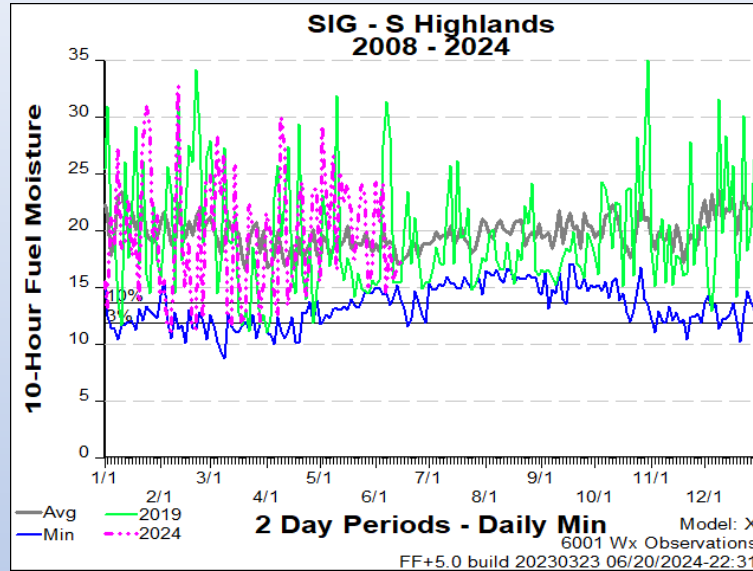
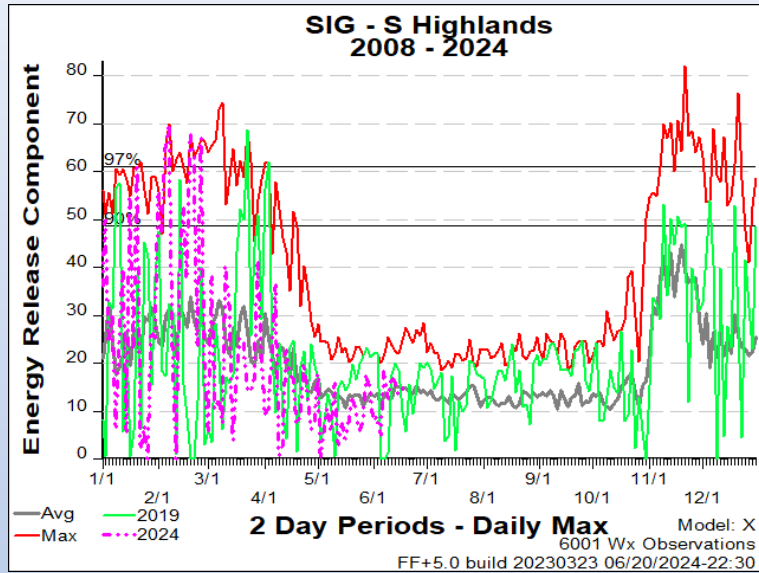
- Read the key and notes for each FDRA, included on the outlook matrix page.
- Forecasts are variable and can change significantly over a forecast cycle and across the landscape.
- This is another tool for gaining better situational awareness, and should be used for general planning purposes only.
- 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 13-30 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



## 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	FRI 21-Jun	SAT 22-Jun	SUN 23-Jun	MON 24-Jun	TUE 25-Jun	WED 26-Jun	THU 27-Jun
Avg. Max. Temp. (°F)	83	86	85	87	88	87	83
Avg. Min. Humidity (%)	51	49	49	49	44	48	56
Avg. 20' Wind Speed (mph)	2	1	3	4	3	3	3
Avg. Wind Direction*	SE	SSE	WSW	WNW	WSW	W	WNW
Avg. Probability of Precip. (%)	12	16	30	43	31	49	55
Days Since a Wetting Rain**	5.3	6.3	7.3	8.3			
Forecast ERC (Fuel Model X)	18.7	22.0	21.6	23.7	27.4	31.7	27.5
Forecast BI (Fuel Model X)	35.2	40.0	44.4	52.1	53.8	61.2	58.2
Forecast IC (Fuel Model X)	3.9	5.3	5.1	6.4	7.1	8.4	5.9
Forecast 100-Hr. FMC	17.4	17.0	17.0	17.3	17.1	17.2	17.5
Forecast 1000-Hr. FMC	20.6	20.3	20.0	19.8	19.6	19.4	19.2
KBDI	249.7						

#### 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

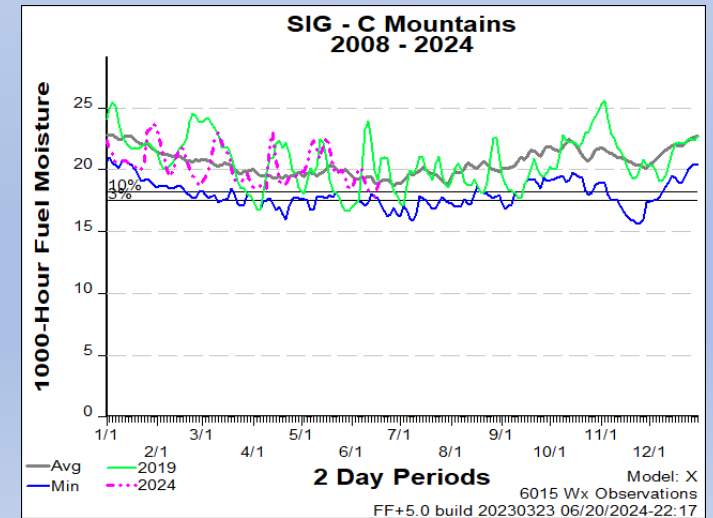
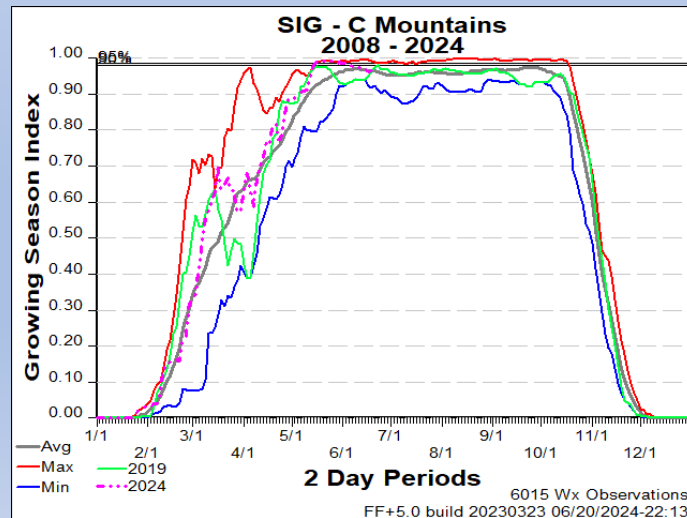
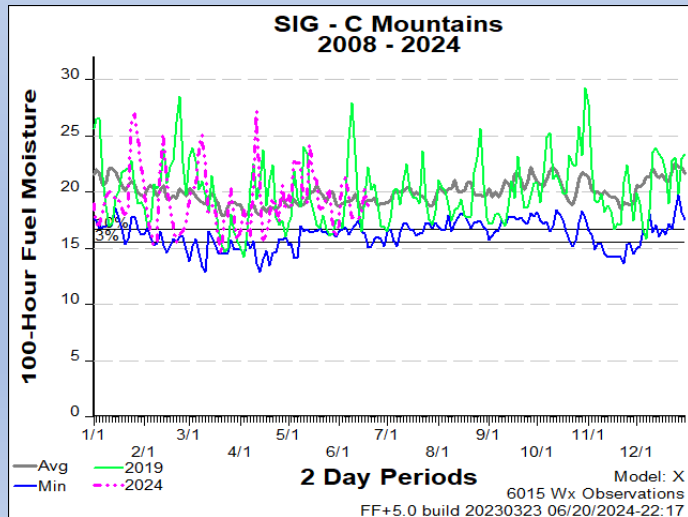
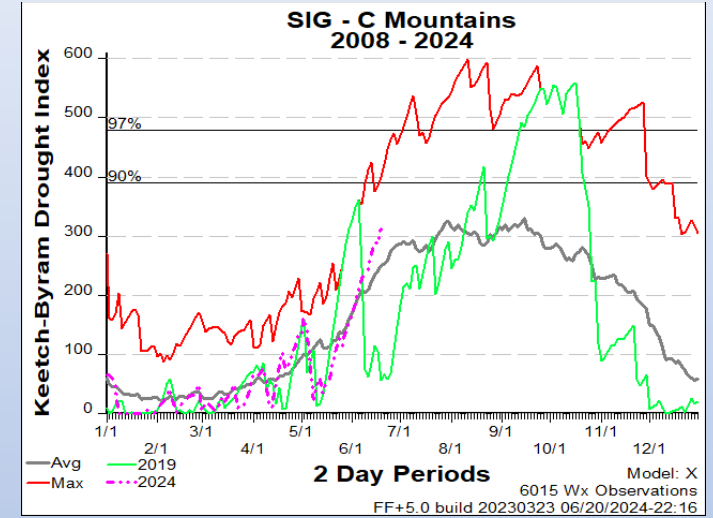
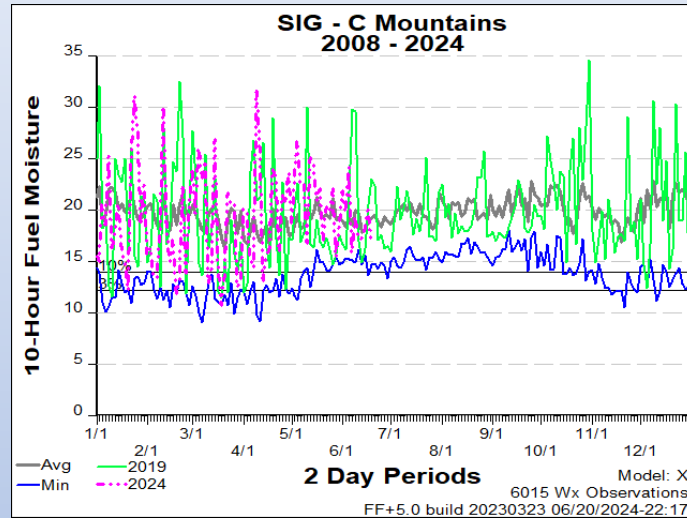
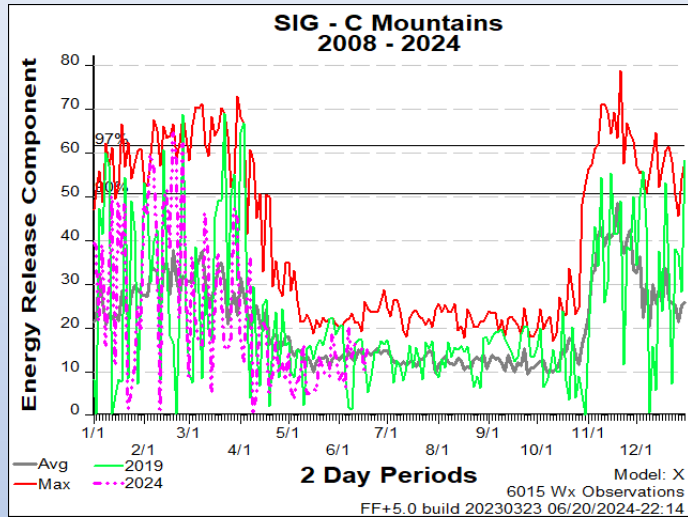
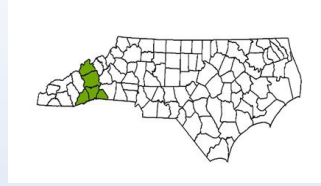
Values in the table above are averages from 3 stations in this FDRA:

- 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**

# FDRA – Central Mountains



## 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	FRI 21-Jun	SAT 22-Jun	SUN 23-Jun	MON 24-Jun	TUE 25-Jun	WED 26-Jun	THU 27-Jun
Avg. Max. Temp. (°F)	87	90	89	90	91	91	86
Avg. Min. Humidity (%)	43	46	49	47	43	46	57
Avg. 20' Wind Speed (mph)	2	2	2	3	2	2	2
Avg. Wind Direction*	SE	S	WSW	WNW	WNW	W	NW
Avg. Probability of Precip. (%)	8	21	35	45	28	46	55
Days Since a Wetting Rain**	6.7	7.7	8.7	9.7			
Forecast ERC (Fuel Model X)	15.0	16.0	15.3	14.7	16.2	17.3	14.4
Forecast BI (Fuel Model X)	21.6	21.4	22.8	25.5	23.0	23.2	22.6
Forecast IC (Fuel Model X)	2.7	3.2	3.2	3.3	3.6	4.0	2.6
Forecast 100-Hr. FMC	17.2	16.8	17.0	17.2	17.1	17.0	17.1
Forecast 1000-Hr. FMC	20.5	20.3	20.0	19.8	19.6	19.5	19.3
KBDI	320.3						

#### Data Source:

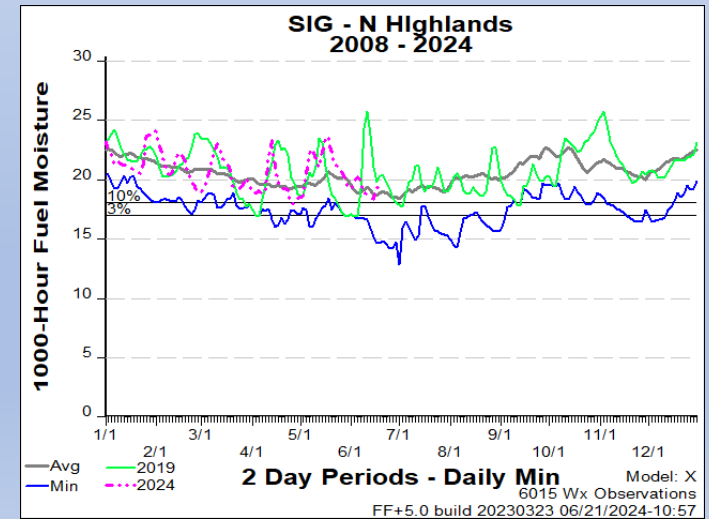
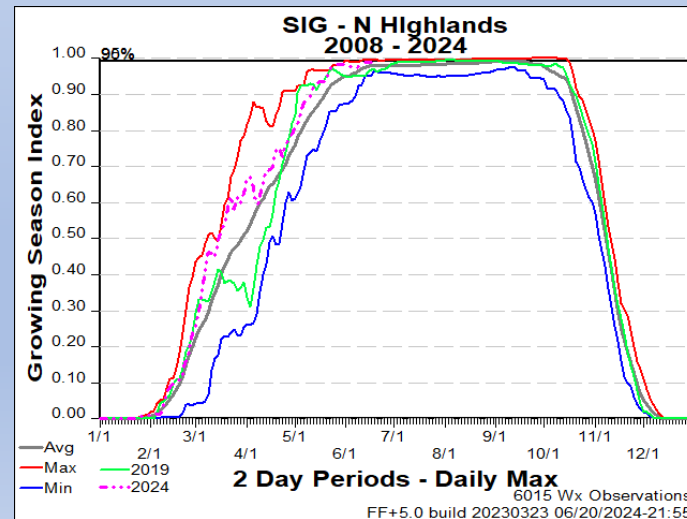
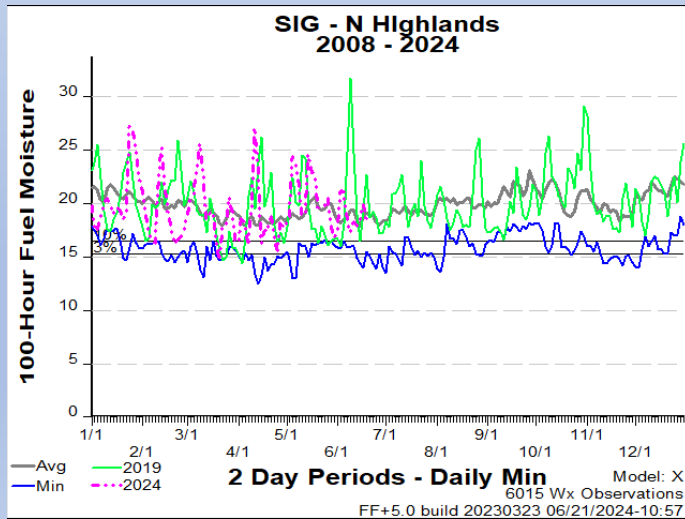
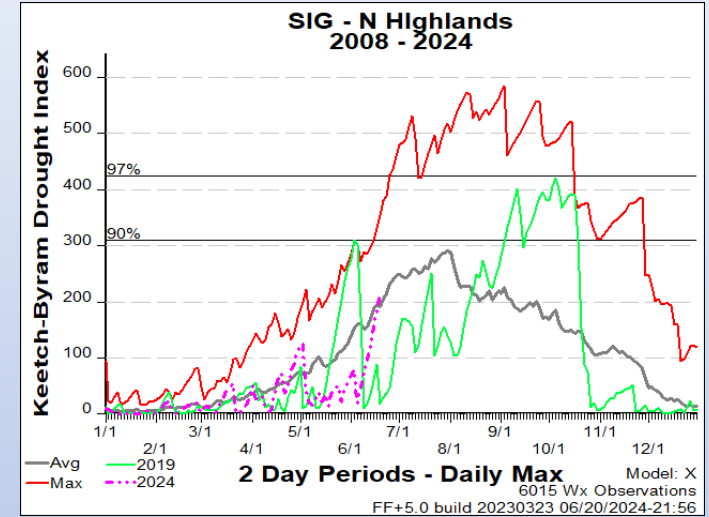
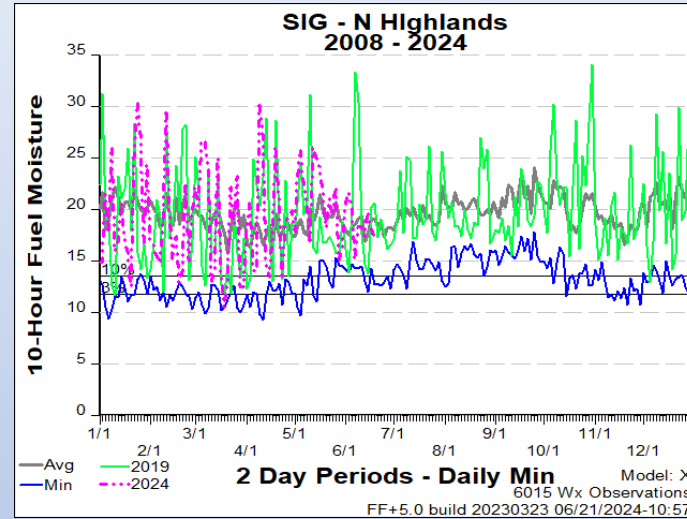
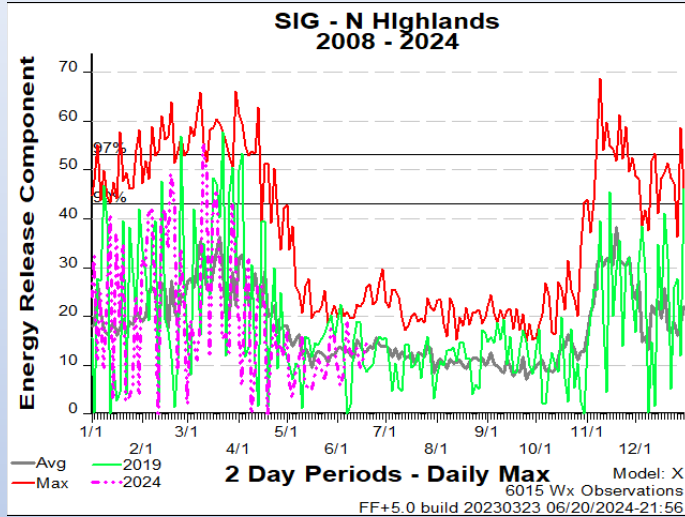
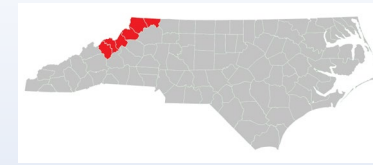
- Weather forecasts come from the National Weather Service's [Digital Forecast Database](#). The wind speed and direction, and probability of precipitation, are calculated as averages of the 1 am, 7 am, 1 pm, and 7 pm forecasts. The 20-foot wind speed is estimated from the 10-meter forecast using the 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



## 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	FRI 21-Jun	SAT 22-Jun	SUN 23-Jun	MON 24-Jun	TUE 25-Jun	WED 26-Jun	THU 27-Jun
Avg. Max. Temp. (°F)	82	84	84	84	86	87	81
Avg. Min. Humidity (%)	48	51	57	50	43	46	58
Avg. 20' Wind Speed (mph)	3	3	5	6	4	3	4
Avg. Wind Direction*	SSE	SW	WSW	WNW	WNW	W	NW
Avg. Probability of Precip. (%)	6	17	37	47	17	38	53
Days Since a Wetting Rain**	3.0	4.0	5.0	6.0			
Forecast ERC (Fuel Model X)	14.0	15.4	14.7	13.9	16.1	17.4	14.5
Forecast BI (Fuel Model X)	22.5	22.5	24.4	24.9	24.2	25.2	23.5
Forecast IC (Fuel Model X)	2.9	3.4	3.6	3.2	4.1	4.5	3.2
Forecast 100-Hr. FMC	17.6	17.4	17.4	17.6	17.5	17.1	17.0
Forecast 1000-Hr. FMC	20.9	20.7	20.5	20.3	20.1	19.9	19.7
KBDI	210.5						

#### 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.

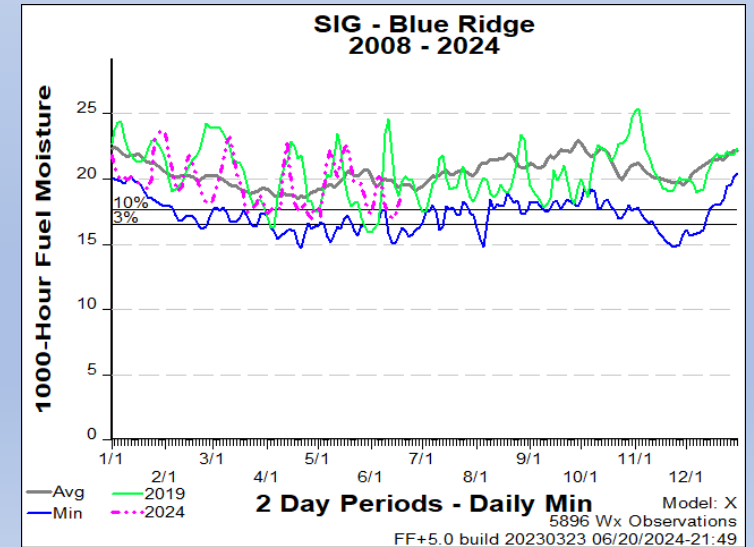
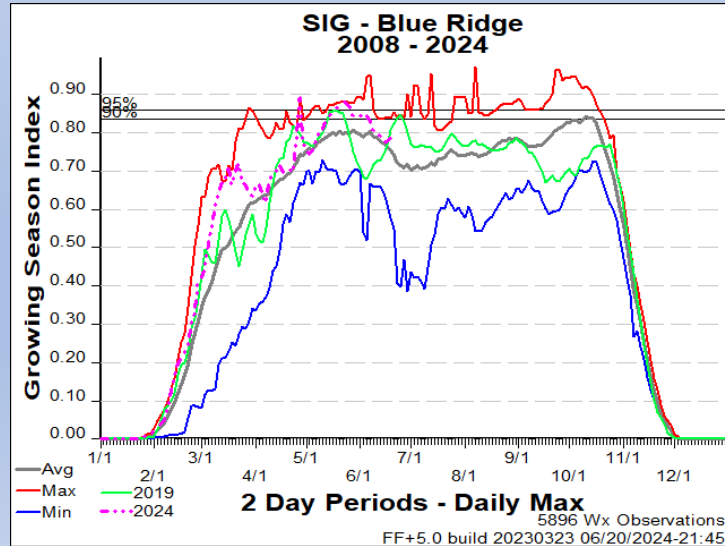
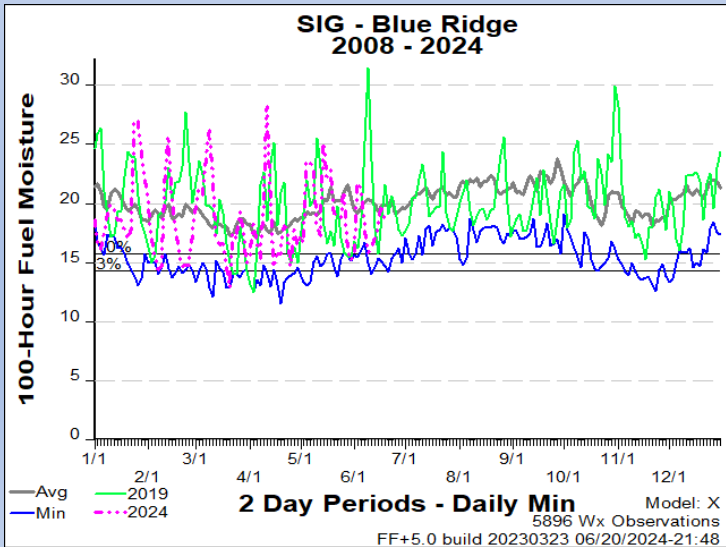
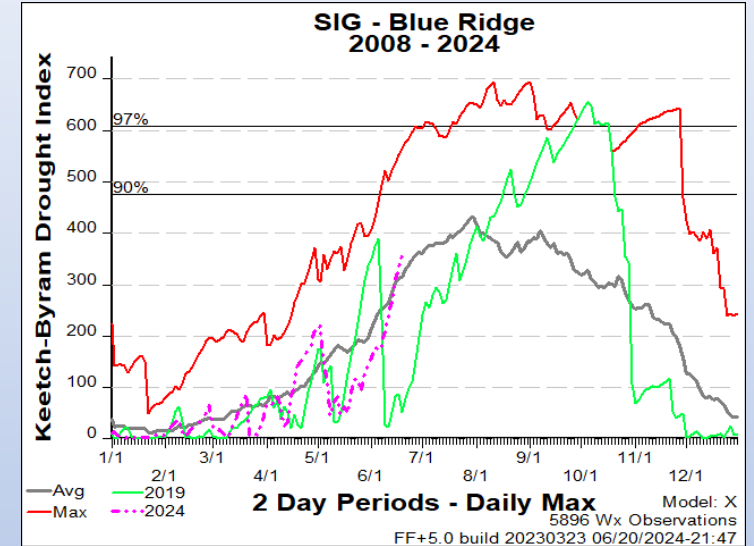
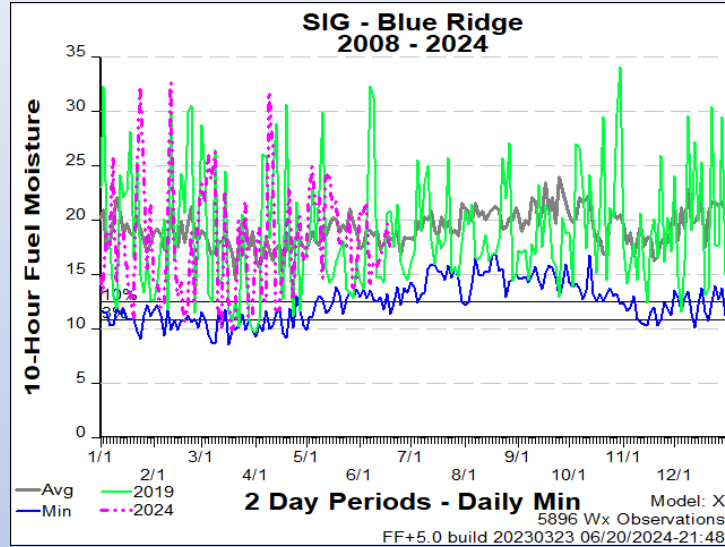
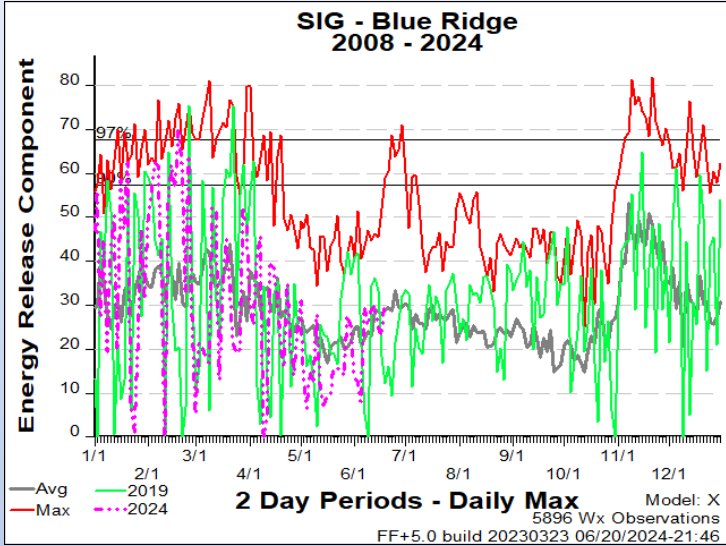
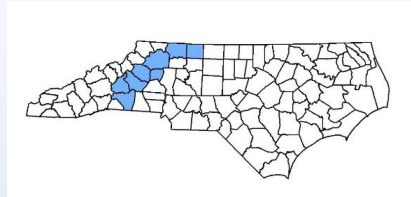
Values in the table above are averages from 3 stations in this FDRA:

- 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			



# FDRA – Blue Ridge Escarpment



## 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	FRI 21-Jun	SAT 22-Jun	SUN 23-Jun	MON 24-Jun	TUE 25-Jun	WED 26-Jun	THU 27-Jun
Avg. Max. Temp. (°F)	88	90	90	91	92	92	87
Avg. Min. Humidity (%)	42	45	49	41	37	41	51
Avg. 20' Wind Speed (mph)	2	2	3	4	2	2	3
Avg. Wind Direction*	SE	S	WSW	WNW	WNW	W	NW
Avg. Probability of Precip. (%)	4	14	34	38	19	36	49
Days Since a Wetting Rain**	14.7	15.7	16.7	17.7			
Forecast ERC (Fuel Model X)	25.8	29.6	27.7	27.2	33.4	36.0	31.1
Forecast BI (Fuel Model X)	40.3	45.3	47.1	49.3	48.3	55.7	51.9
Forecast IC (Fuel Model X)	4.4	5.9	5.5	5.5	6.7	8.1	5.7
Forecast 100-Hr. FMC	17.0	17.3	17.6	17.9	17.6	17.3	17.4
Forecast 1000-Hr. FMC	18.0	17.7	17.6	17.5	17.5	17.4	17.2
KBDI	356.7						

**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:

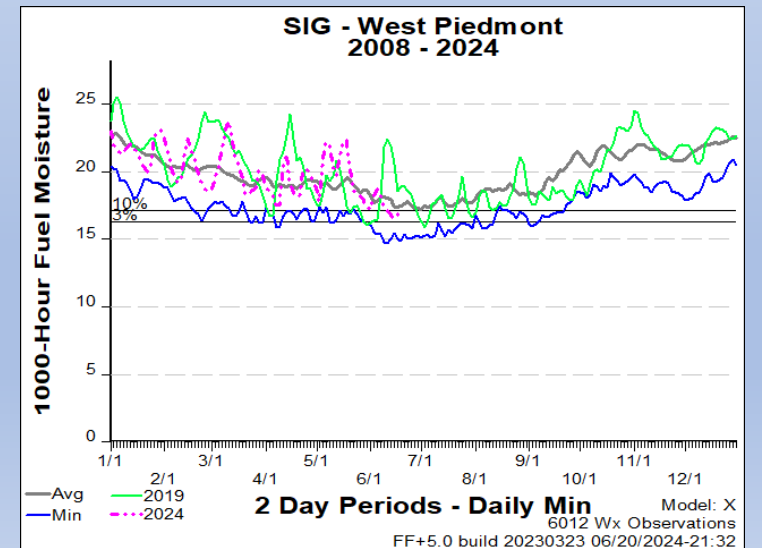
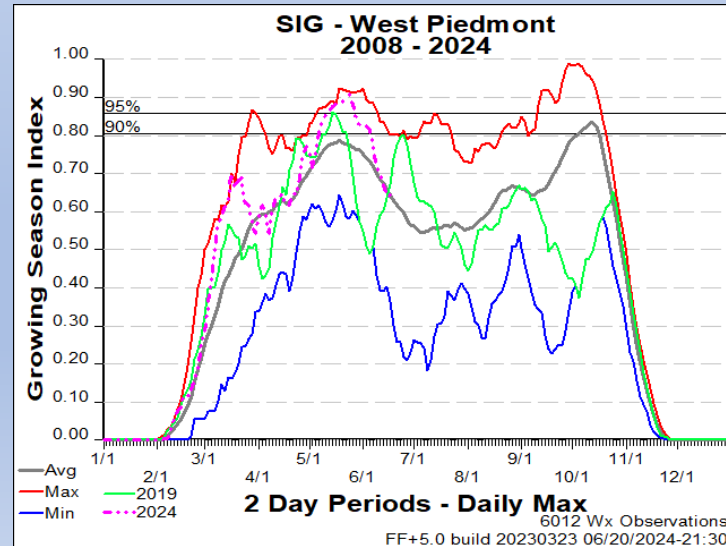
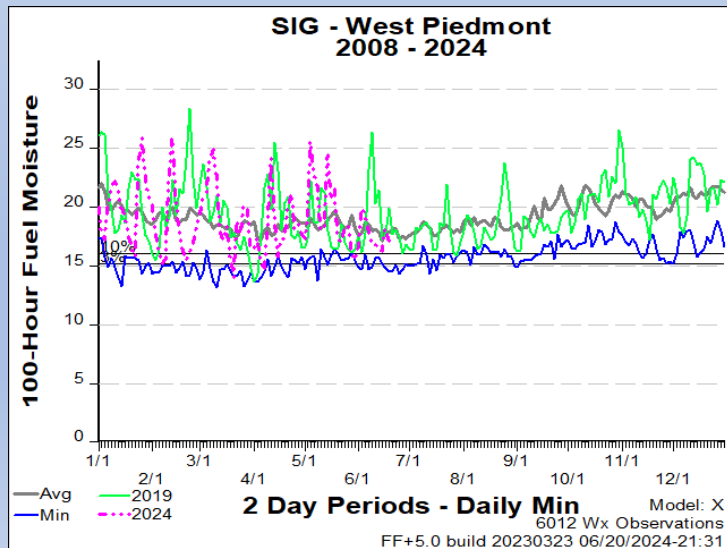
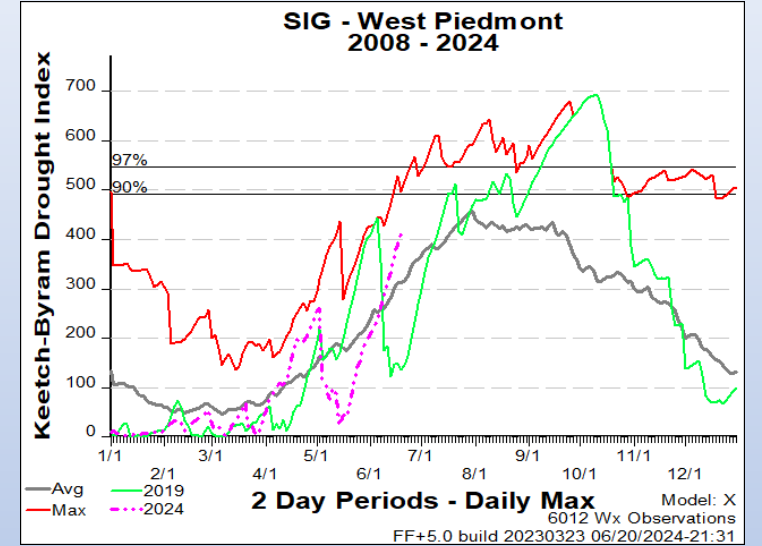
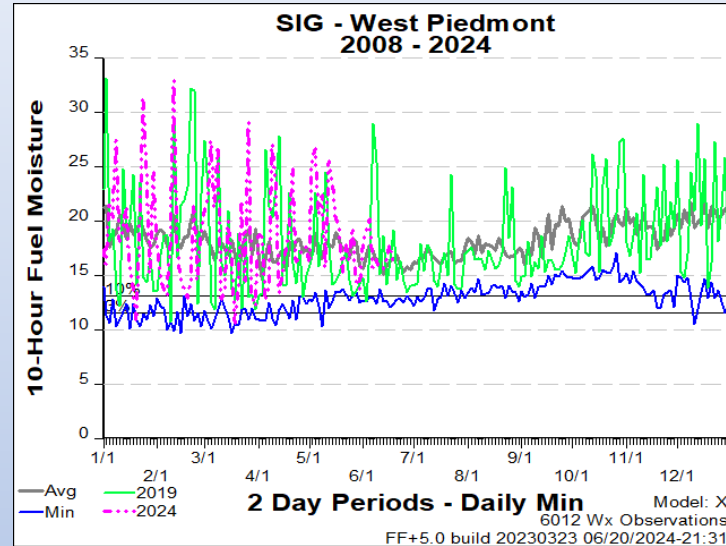
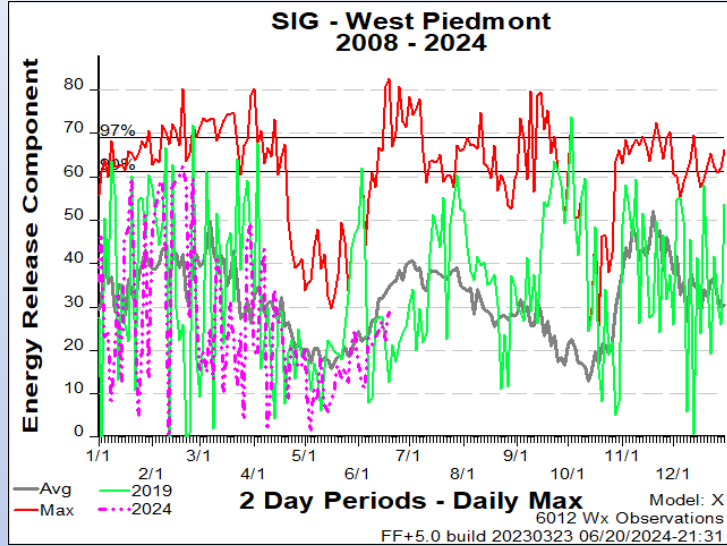
- Rendezvous Mtn. (312001)
- North Cove Pinnacle (fr1) (314301)
- Rutherford County (316302)

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**

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

# 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	FRI 21-Jun	SAT 22-Jun	SUN 23-Jun	MON 24-Jun	TUE 25-Jun	WED 26-Jun	THU 27-Jun
Avg. Max. Temp. (°F)	91	94	94	96	96	97	92
Avg. Min. Humidity (%)	39	43	48	42	36	38	50
Avg. 20' Wind Speed (mph)	2	3	5	4	3	3	3
Avg. Wind Direction*	SSE	SSW	SW	WSW	SSW	SW	SW
Avg. Probability of Precip. (%)	0	5	34	30	14	24	39
Days Since a Wetting Rain**	17.7	18.7	19.7	20.7			
Forecast ERC (Fuel Model X)	24.0	24.5	24.9	28.1	41.5	47.0	44.7
Forecast BI (Fuel Model X)	28.5	33.9	45.5	53.7	60.6	75.3	72.4
Forecast IC (Fuel Model X)	4.1	4.7	5.9	6.6	9.5	11.6	8.6
Forecast 100-Hr. FMC	16.2	16.1	16.2	16.3	16.3	16.2	16.2
Forecast 1000-Hr. FMC	18.3	18.1	18.0	17.9	17.8	17.7	17.6
KBDI	414.0						

#### 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

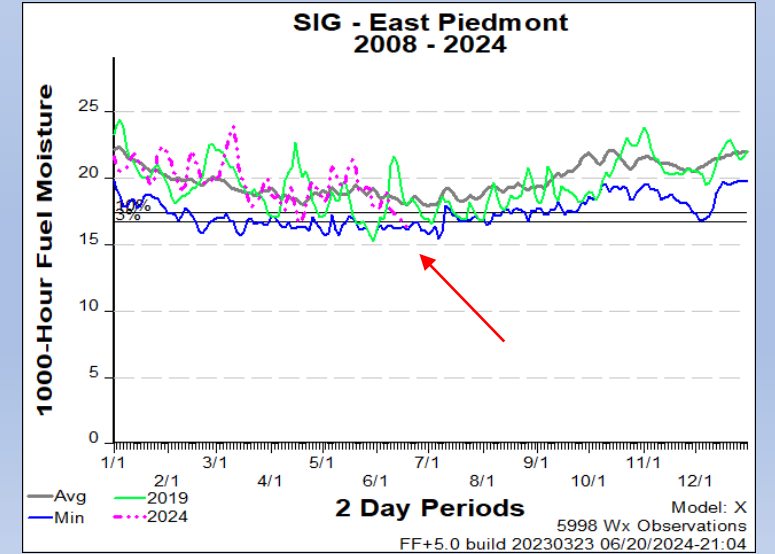
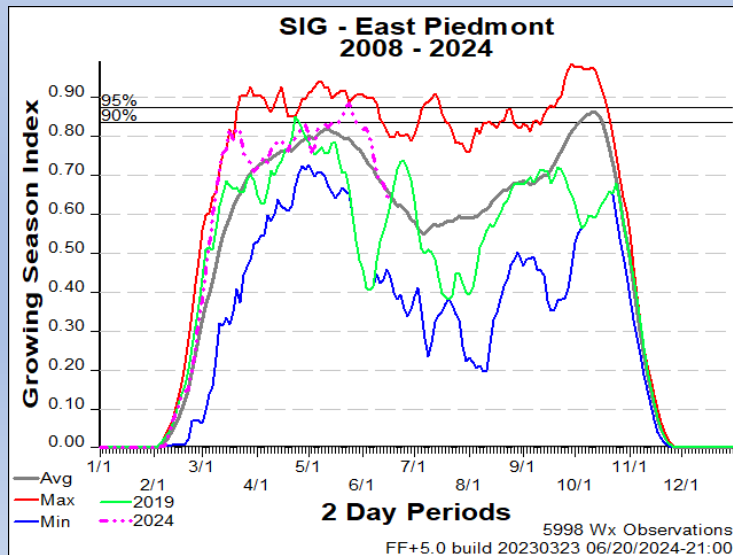
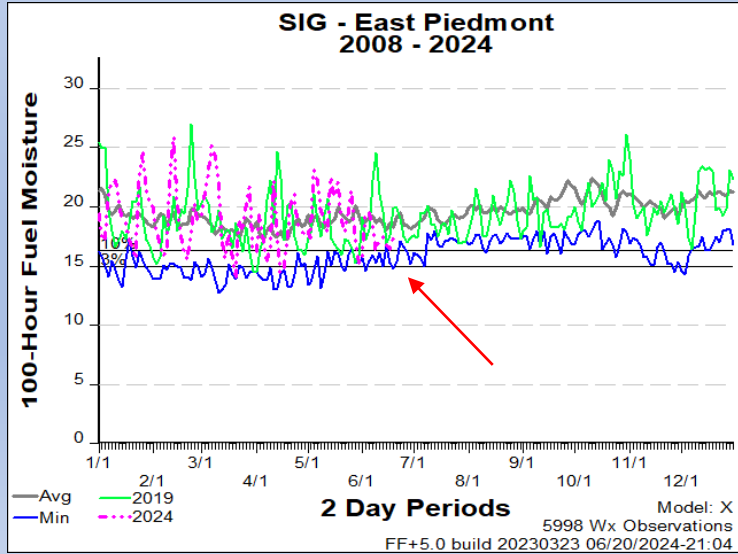
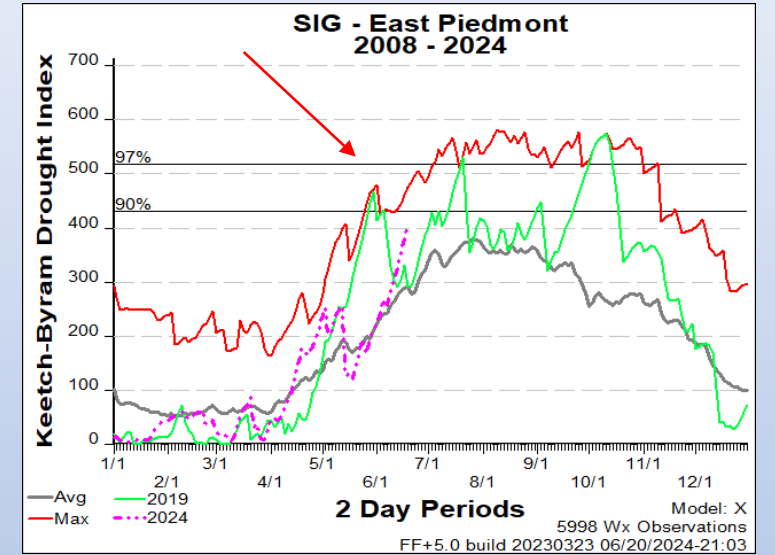
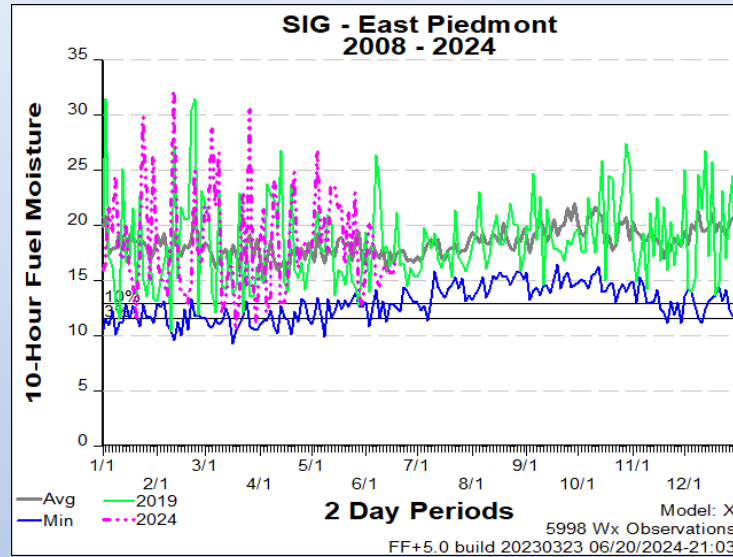
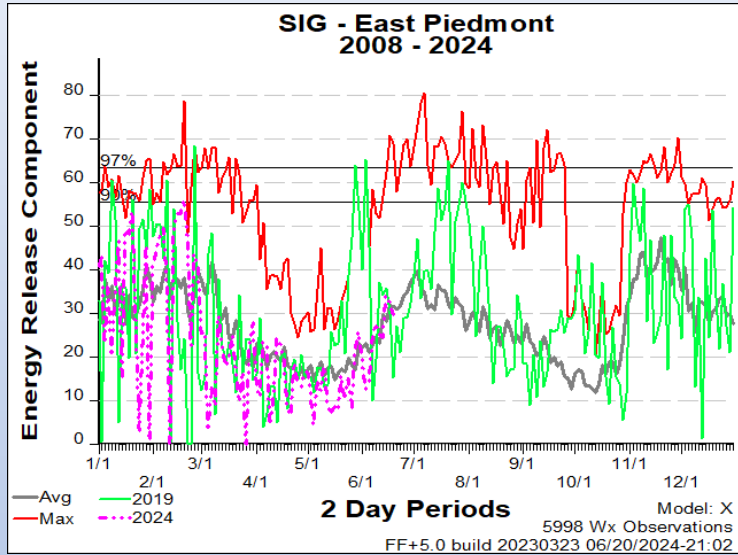
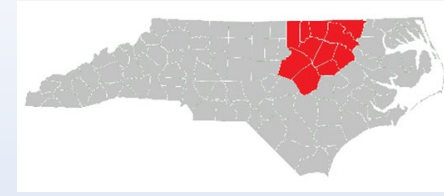
Values in the table above are averages from 3 stations in this FDRA:

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

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

# 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	FRI 21-Jun	SAT 22-Jun	SUN 23-Jun	MON 24-Jun	TUE 25-Jun	WED 26-Jun	THU 27-Jun
Avg. Max. Temp. (°F)	92	96	97	97	97	99	94
Avg. Min. Humidity (%)	36	40	45	44	35	36	50
Avg. 20' Wind Speed (mph)	2	3	7	6	3	4	4
Avg. Wind Direction*	SE	SSW	SSW	SW	SW	SSW	SSW
Avg. Probability of Precip. (%)	1	5	33	42	12	18	40
Days Since a Wetting Rain**	1.0	2.0	3.0	4.0			
Forecast ERC (Fuel Model X)	28.3	29.6	34.0	32.4	44.5	48.4	47.7
Forecast BI (Fuel Model X)	40.1	49.4	80.4	76.5	71.7	87.5	81.2
Forecast IC (Fuel Model X)	4.9	5.7	10.2	8.0	9.5	11.5	9.6
Forecast 100-Hr. FMC	17.1	17.3	17.3	17.5	17.4	17.3	17.1
Forecast 1000-Hr. FMC	18.2	18.2	18.2	18.2	18.1	18.1	18.1
KBDI	405.8						

#### 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

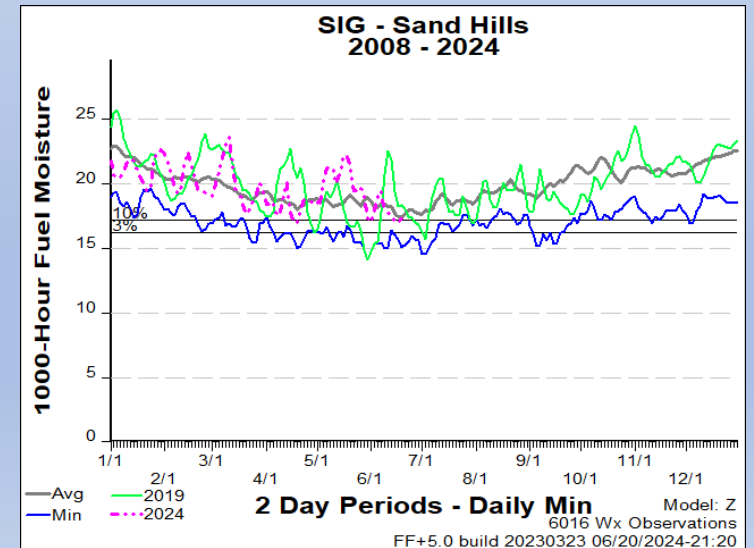
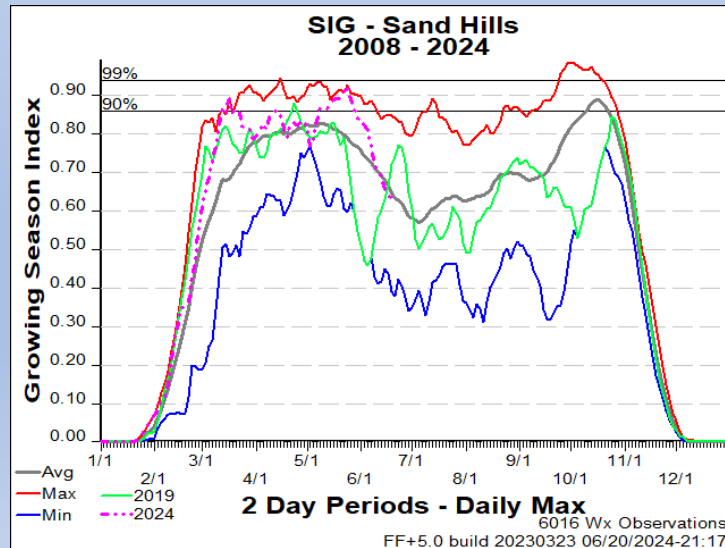
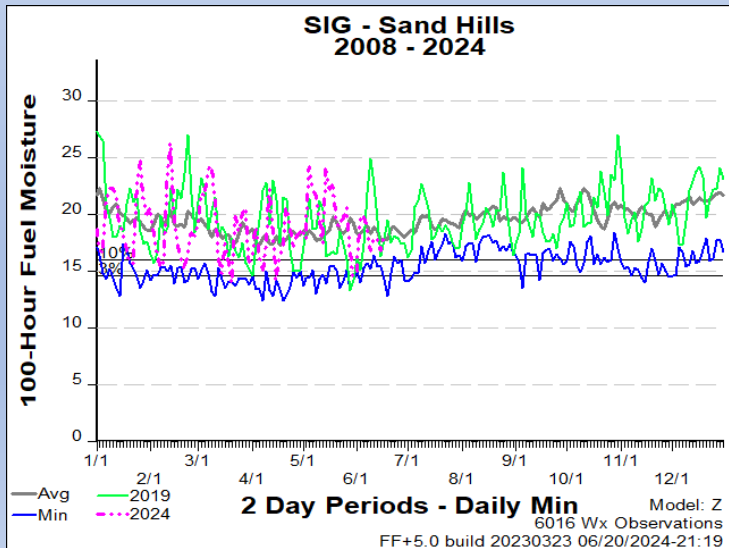
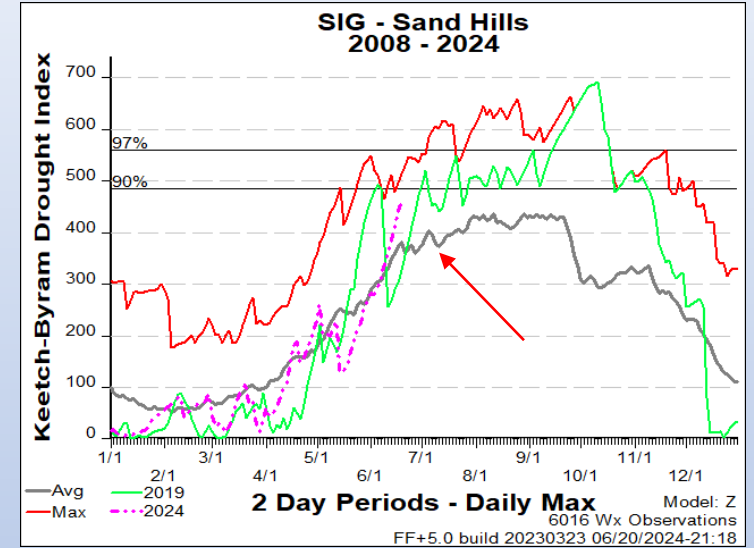
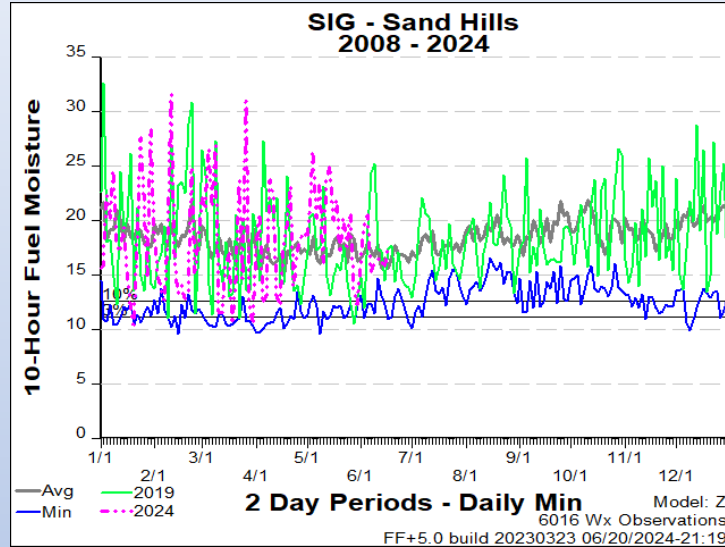
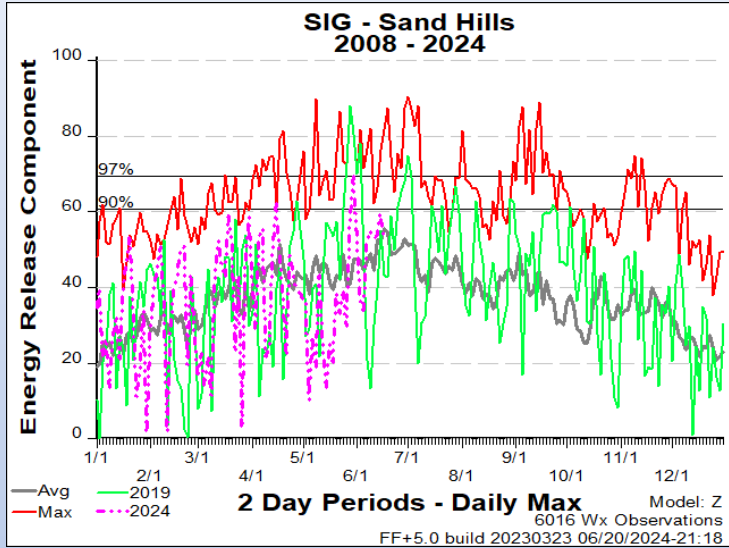
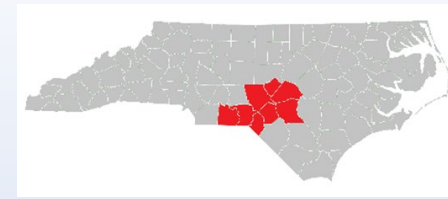
Values in the table above are averages from 4 stations in this FDRA:

- 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	FRI 21-Jun	SAT 22-Jun	SUN 23-Jun	MON 24-Jun	TUE 25-Jun	WED 26-Jun	THU 27-Jun
Avg. Max. Temp. (°F)	94	96	96	98	98	100	96
Avg. Min. Humidity (%)	33	39	44	38	31	31	44
Avg. 20' Wind Speed (mph)	3	3	5	4	3	3	3
Avg. Wind Direction*	ESE	SSW	SSW	SW	S	SSW	WSW
Avg. Probability of Precip. (%)	3	10	35	41	15	21	39
Days Since a Wetting Rain**	9.0	10.0	11.0	12.0			
Forecast ERC (Fuel Model Z)	49.0	47.4	46.8	46.7	51.2	51.8	50.9
Forecast BI (Fuel Model Z)	34.6	32.5	40.3	39.1	35.9	39.4	38.6
Forecast IC (Fuel Model Z)	9.2	7.1	8.7	8.4	11.2	12.7	10.9
Forecast 100-Hr. FMC	17.2	17.3	17.3	17.4	17.3	17.2	17.1
Forecast 1000-Hr. FMC	18.5	18.5	18.4	18.4	18.4	18.3	18.3
KBDI	464.0						

#### 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:

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

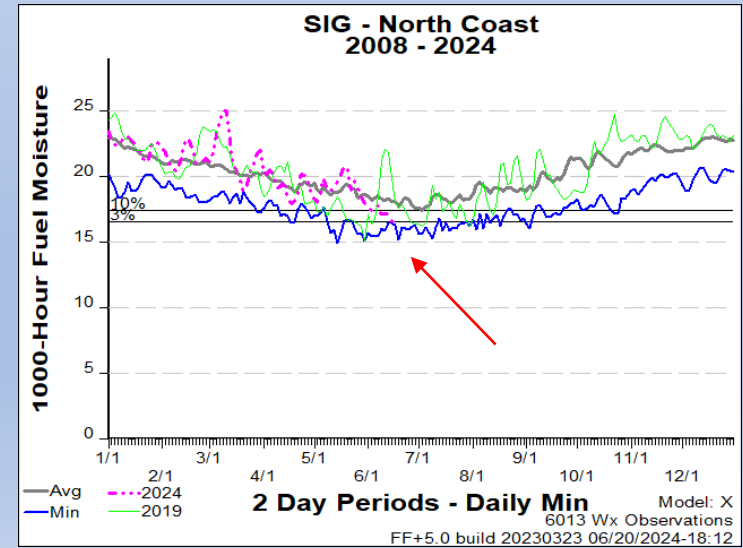
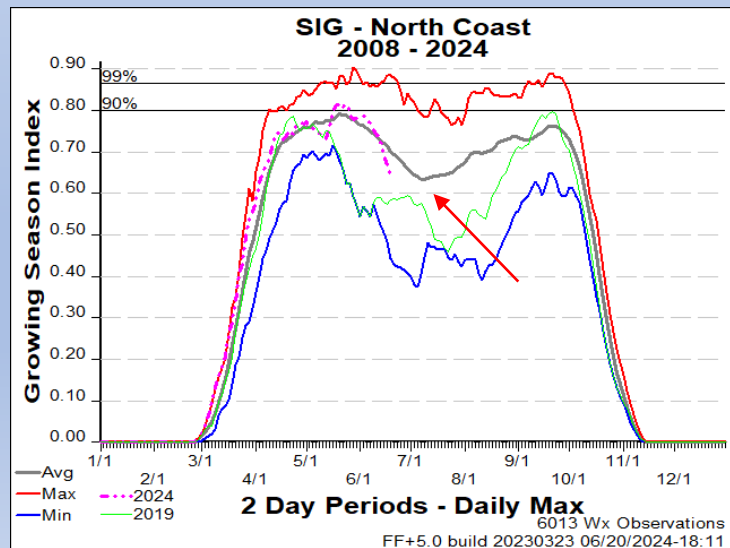
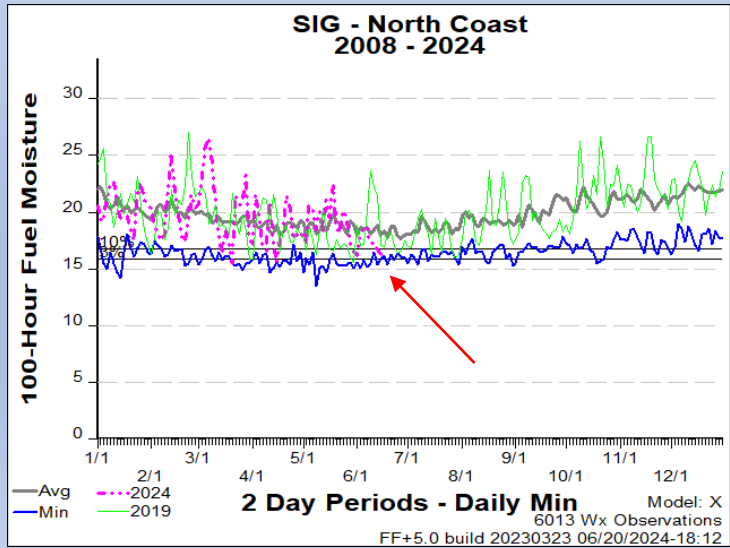
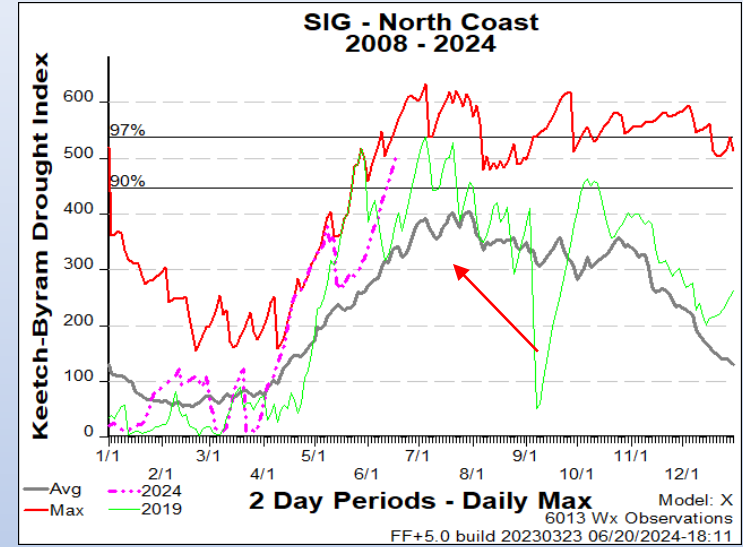
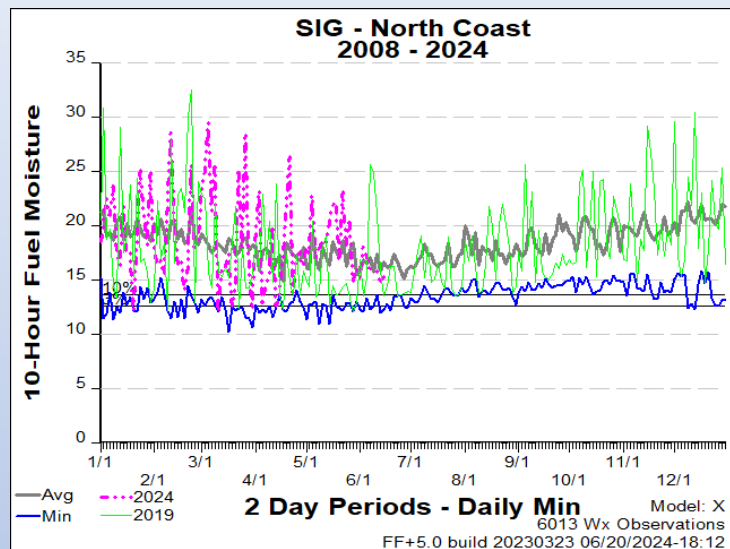
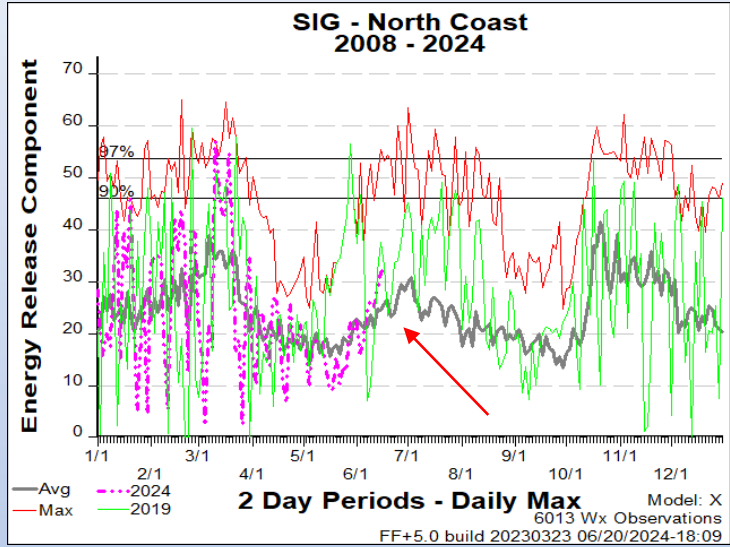
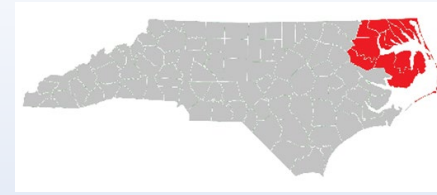
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 40%	Between 30% and 40%	Less than 30%
Avg. 20' Wind Speed	Less than 4 mph	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**

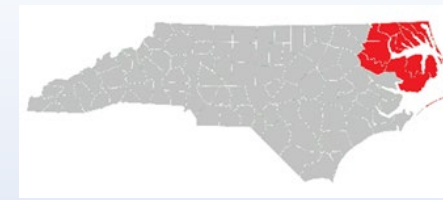
0-74<sup>th</sup>; 75-89<sup>th</sup>; 90<sup>th</sup>+ (Indices)  
26-100<sup>th</sup>; 11-25<sup>th</sup>; 0-10<sup>th</sup> (Fuel Moisture)



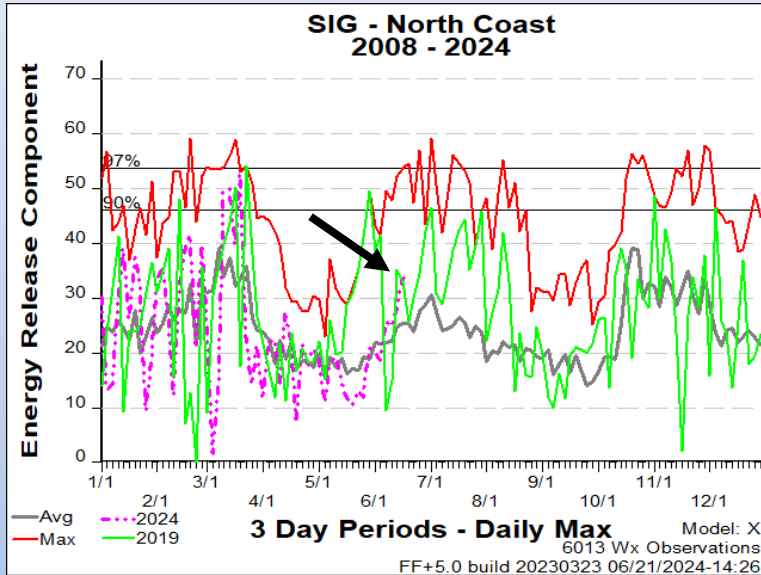
# FDRA – North Coast



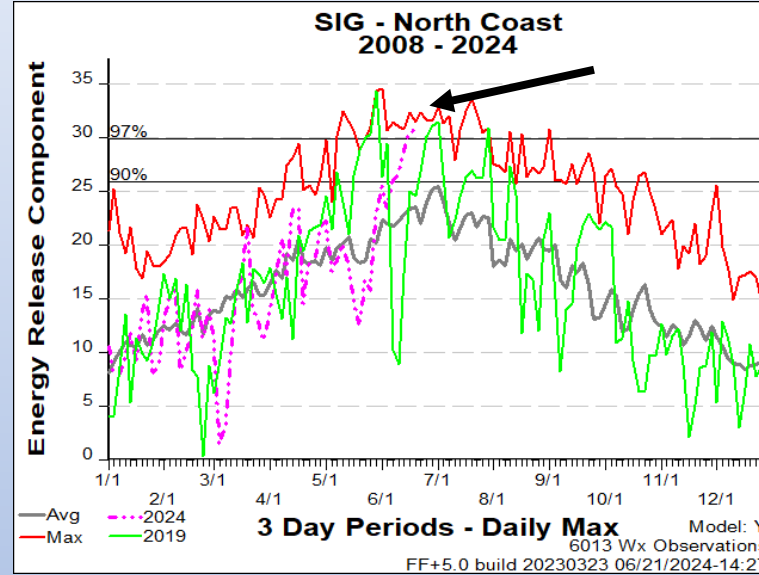
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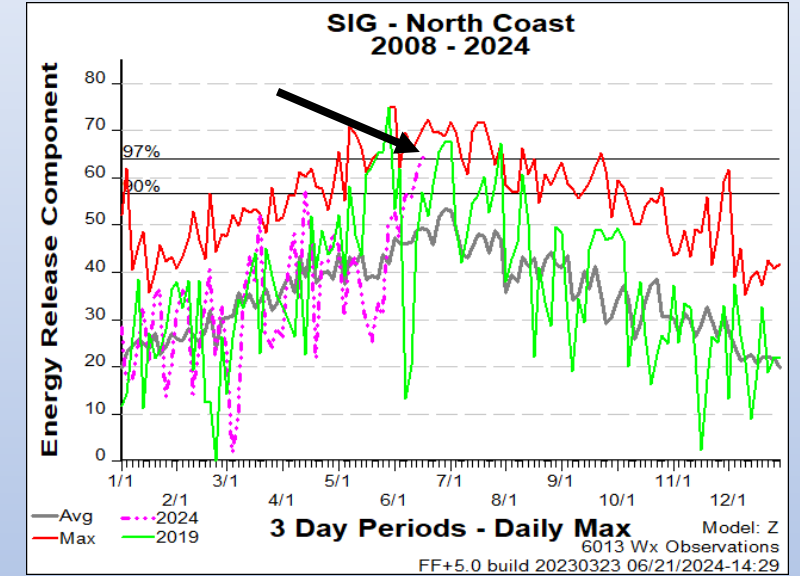
## ERC-X



## ERC-Y



## ERC-Z



### Comparison of ERC by NFDRS Fuel Model

X: 1's, 10's, Live Component

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

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

-----  
All three point towards condition well above average, with Y & Z above the 97<sup>th</sup> percentile – near seasonal maximums at the time of this FF+ run.  
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Average, Max/Min, CY Year 2019 are displayed along with Year-to-Date 2024

## 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	FRI 21-Jun	SAT 22-Jun	SUN 23-Jun	MON 24-Jun	TUE 25-Jun	WED 26-Jun	THU 27-Jun
Avg. Max. Temp. (°F)	89	94	95	93	92	96	93
Avg. Min. Humidity (%)	46	47	46	54	47	44	53
Avg. 20' Wind Speed (mph)	5	6	10	10	5	7	7
Avg. Wind Direction*	SE	SSW	SSW	SSW	SSW	SSW	SSW
Avg. Probability of Precip. (%)	5	10	28	44	12	16	39
Days Since a Wetting Rain**	14.3	15.3	16.3	17.3			
Forecast ERC (Fuel Model X)	24.2	25.8	28.0	28.4	28.6	31.3	31.1
Forecast BI (Fuel Model X)	28.9	39.0	61.1	65.6	37.0	48.7	46.9
Forecast IC (Fuel Model X)	3.5	4.8	8.4	8.7	4.4	6.5	5.6
Forecast 100-Hr. FMC	15.9	16.1	16.3	16.5	16.6	16.5	16.4
Forecast 1000-Hr. FMC	18.0	17.9	17.9	17.8	17.7	17.7	17.6
KBDI	516.3						

#### 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:

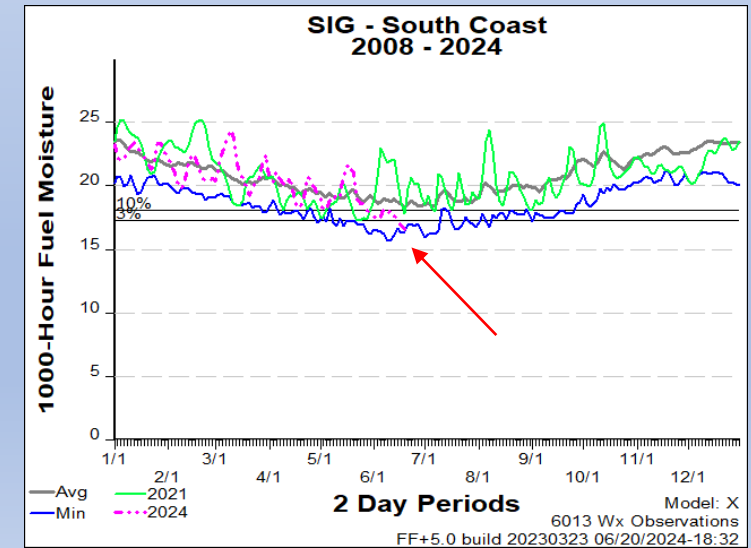
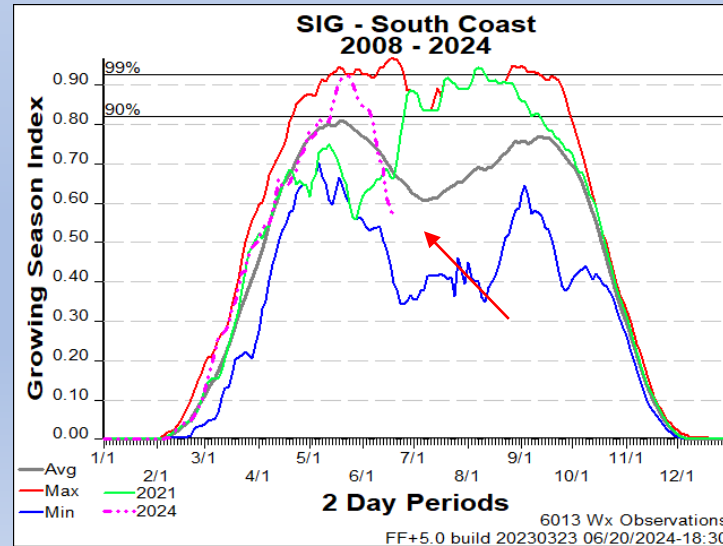
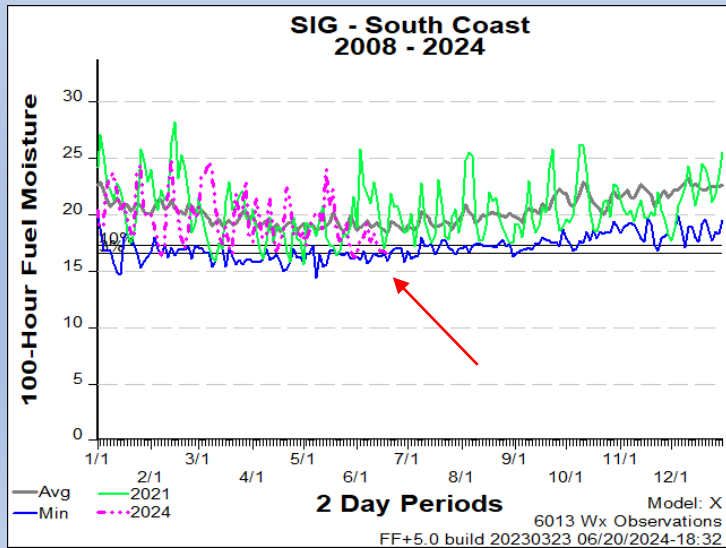
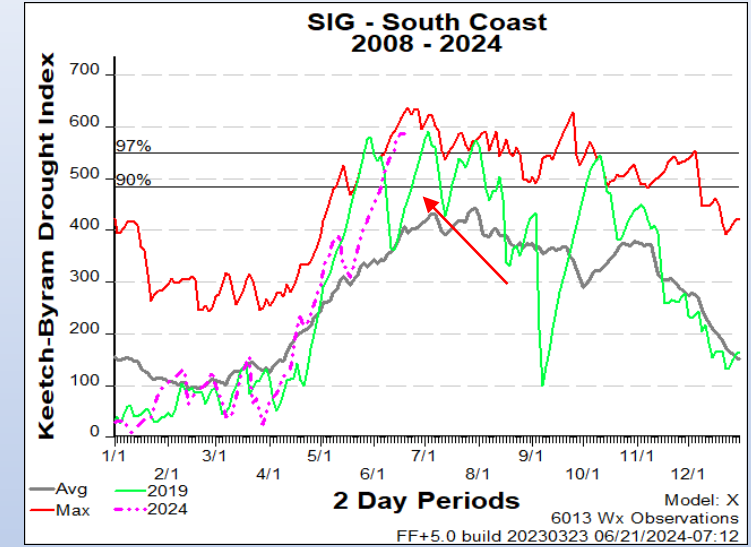
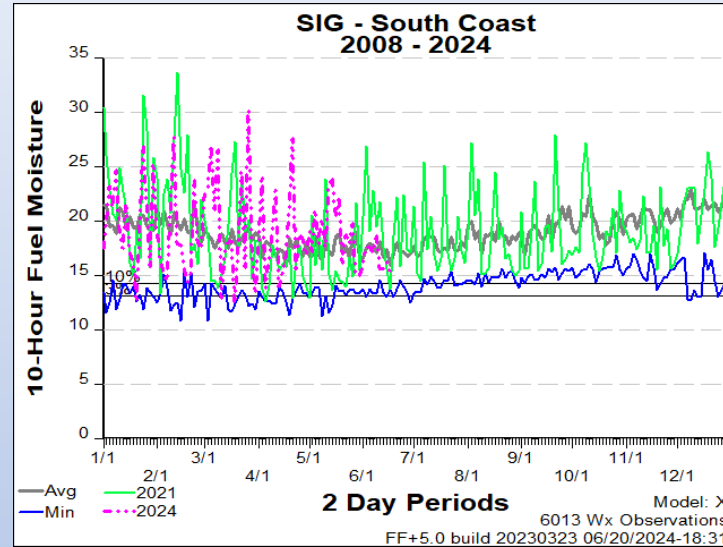
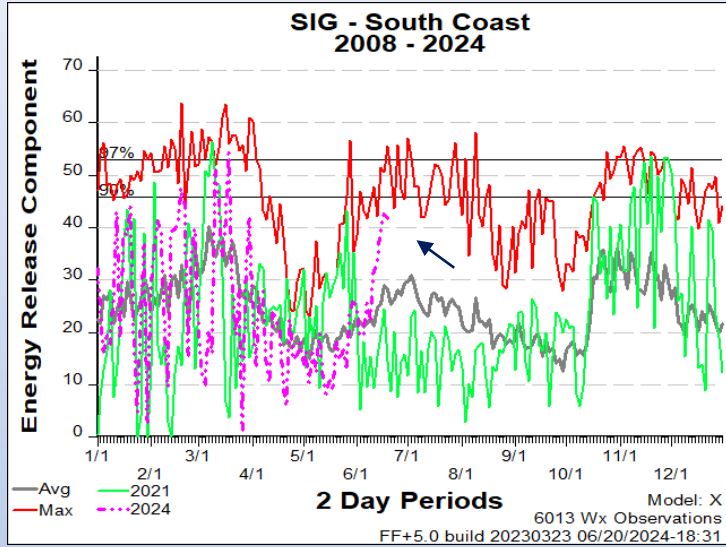
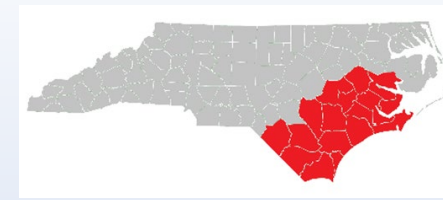
- Elizabeth City (311503)
- Greens Cross (313001)
- Pocosin Lakes (315201)
- Fairfield (317901)

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

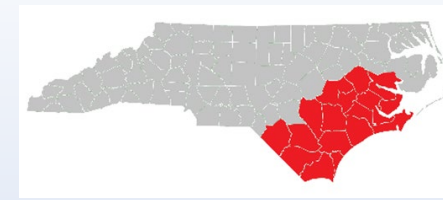
**Other factors to consider when determining fire danger: sky conditions, precipitation amount, number of days since rain, and season**

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

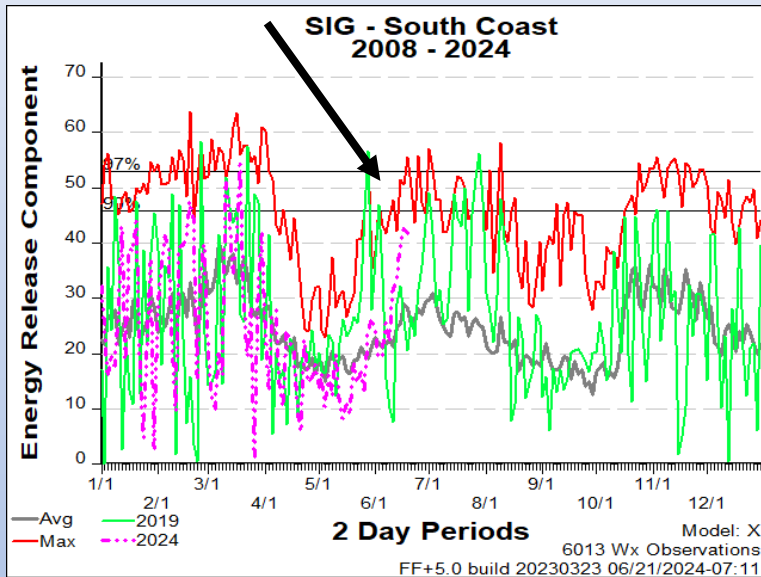
# FDRA – South Coast



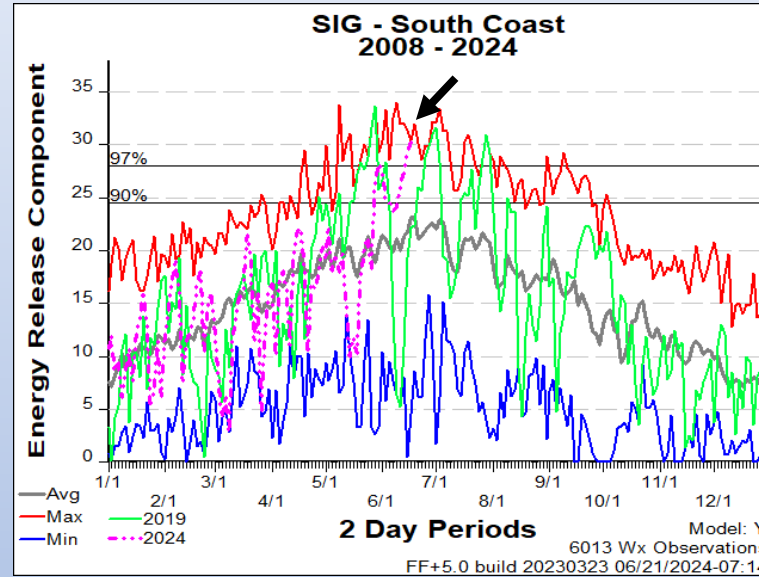
# FDRA – South Coast (continued)



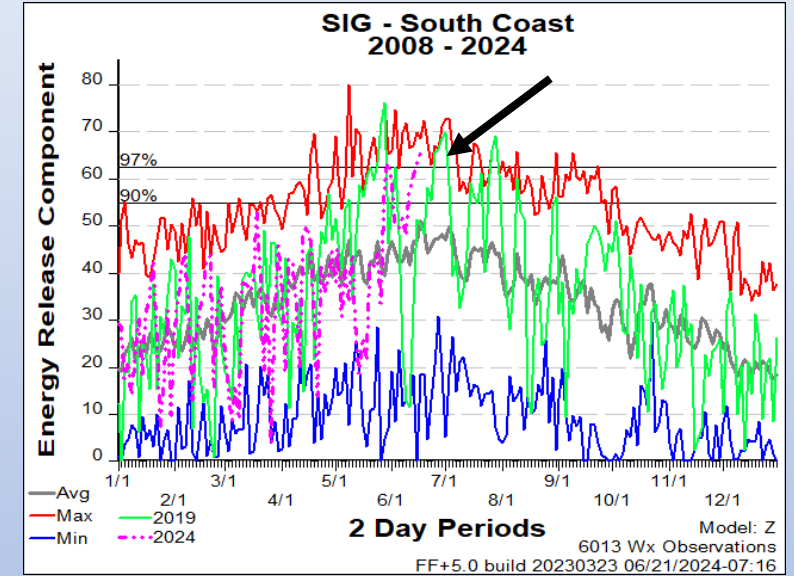
**ERC-X**



**ERC-Y**



**ERC-Z**



## Comparison of ERC by NFDRS Fuel Model

X: 1's, 10's, Live Component

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

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

All three point towards condition well above average, with Y & Z above the 97<sup>th</sup> percentile – near or at seasonal maximums at the time of this FF+ run.

Average, Max/Min, CY Year 2019 are displayed along with Year-to-Date 2024

## 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	FRI 21-Jun	SAT 22-Jun	SUN 23-Jun	MON 24-Jun	TUE 25-Jun	WED 26-Jun	THU 27-Jun
Avg. Max. Temp. (°F)	91	94	94	95	96	97	95
Avg. Min. Humidity (%)	49	50	51	53	43	41	50
Avg. 20' Wind Speed (mph)	5	4	7	6	3	5	5
Avg. Wind Direction*	ESE	SSW	SSW	SSW	SW	SSW	SW
Avg. Probability of Precip. (%)	19	23	32	51	20	20	38
Days Since a Wetting Rain**	13.0	14.0	15.0	16.0			
Forecast ERC (Fuel Model X)	34.9	32.5	31.8	33.5	37.4	38.5	38.2
Forecast BI (Fuel Model X)	58.2	53.9	74.5	69.9	49.5	65.5	67.8
Forecast IC (Fuel Model X)	6.3	5.2	7.3	7.3	5.4	7.4	7.4
Forecast 100-Hr. FMC	16.1	16.6	16.9	17.1	17.0	16.8	16.7
Forecast 1000-Hr. FMC	18.3	18.2	18.2	18.1	18.1	18.0	18.0
KBDI	615.3						

#### 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

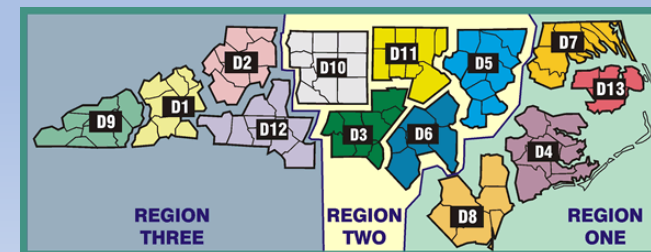
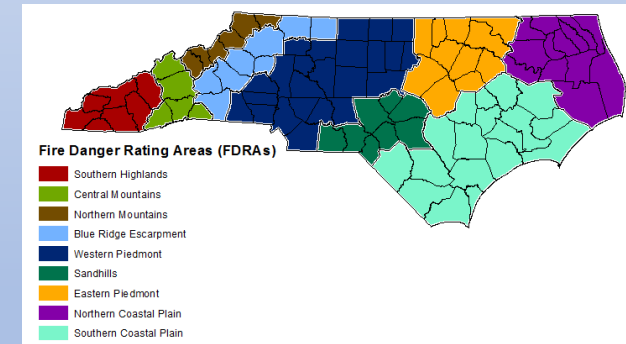
Other factors to consider when determining fire danger: sky conditions, precipitation amount, number of days since rain, and season

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

Date	Day of Week	Predicted <u>Adjective Rating</u> - Fire Danger (ERC & 100-HR)								
		Southern Highlands	Central Mountains	Northern Highlands	Blue Ridge Escarp	Western Piedmont	Sandhills	East Piedmont	South Coast	North Coast
21-Jun	Fri	M	M	M	M	M	H	M	H	H
22-Jun	Sat	H	M	M	M	M	H	M	H	M
23-Jun	Sun	M	M	M	M	M	H	M	H	M
24-Jun	Mon	H	M	M	M	M	H	M	H	M
25-Jun	Tue	H	M	M	H	H	H	M	H	M
26-Jun	Wed	H	M	M	H	H	H	M	H	H
27-Jun	Thu	H	M	M	H	H	H	M	H	H

Predicted Adjective Rating Summary Table by FDRA

This summary table is compiled from the daily Fire Danger Map available [here](#), based upon a matrix of ERC and 100-hr Fuel Moisture values for each FDRA. Outputs are based upon daily weather and NFDRS forecasts projected through seven days averaged between "SIG" stations. Forecasts and resulting outputs will change significantly over time & also depend upon actual precip amount/duration. Local factors should also be considered.

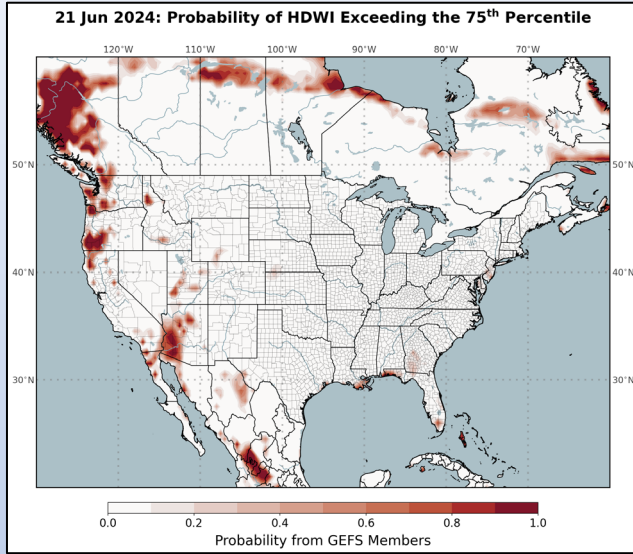


# Statewide Slides

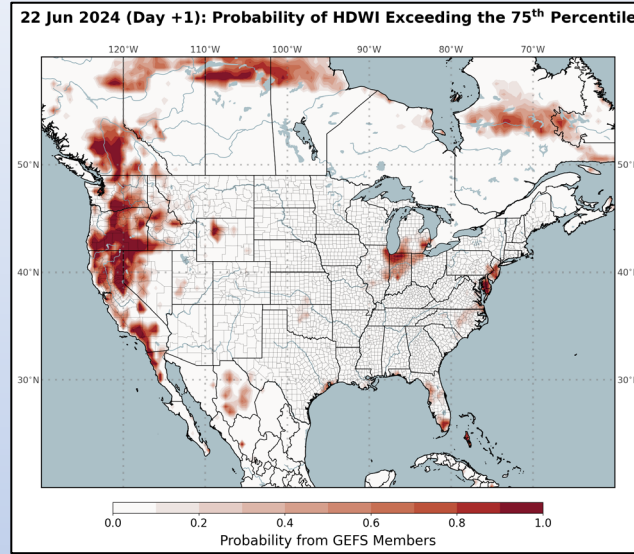


# Hot-Dry-Windy Index (HDW)

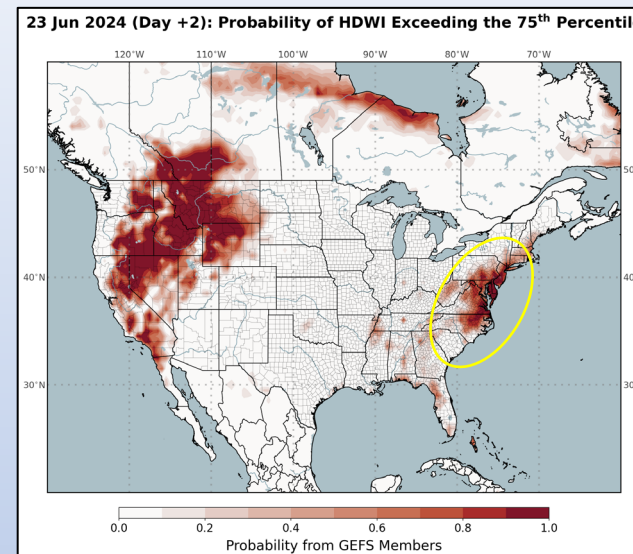
Friday > 75<sup>th</sup> Percentile



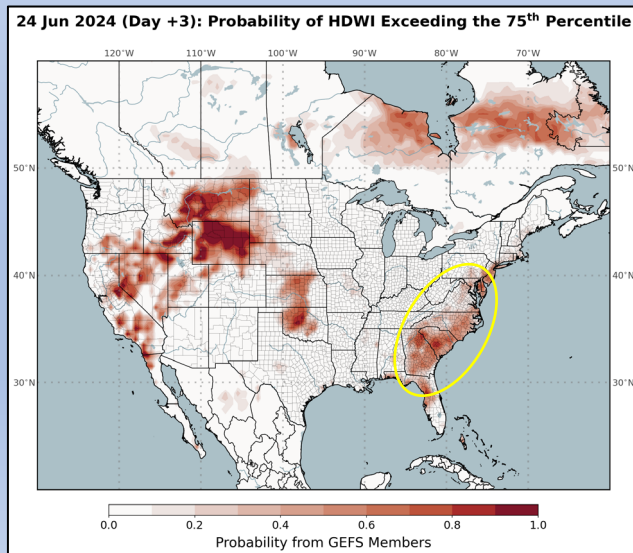
Saturday > 75<sup>th</sup> Percentile



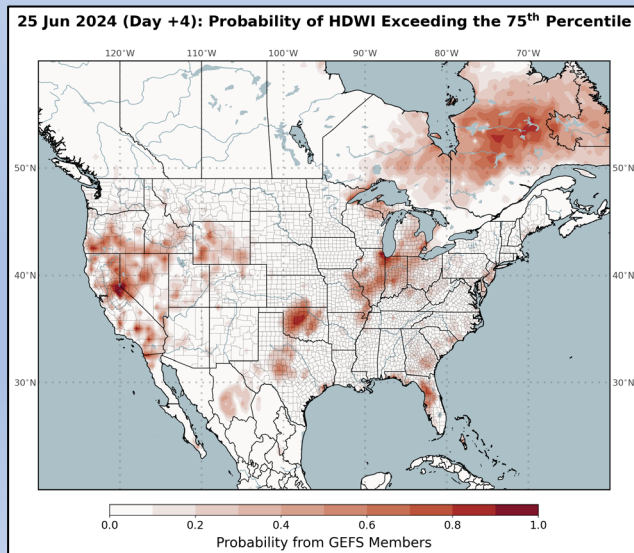
Sunday > 75<sup>th</sup> Percentile



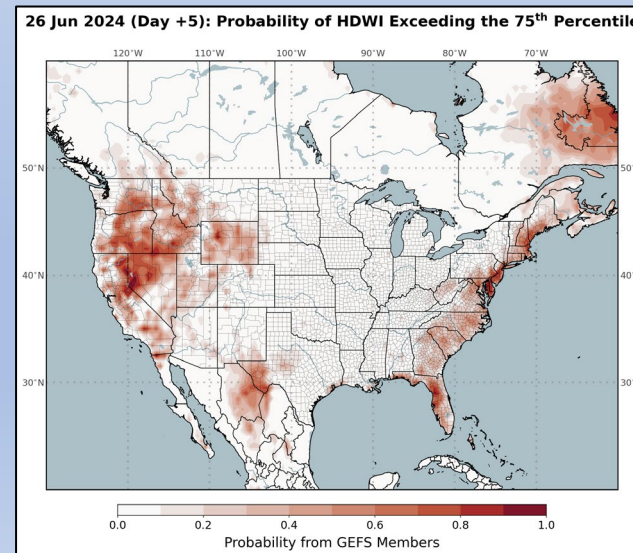
Monday > 75<sup>th</sup> Percentile



Tuesday > 75<sup>th</sup> Percentile

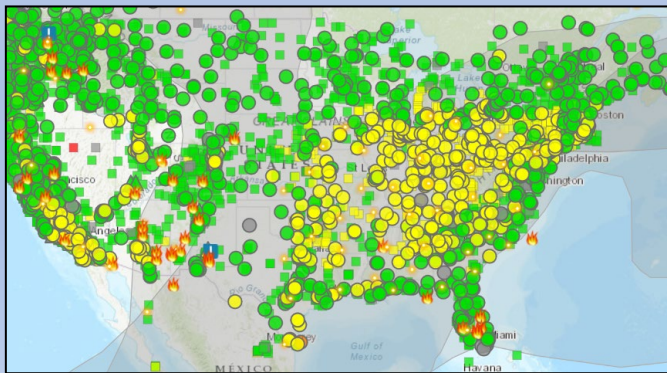
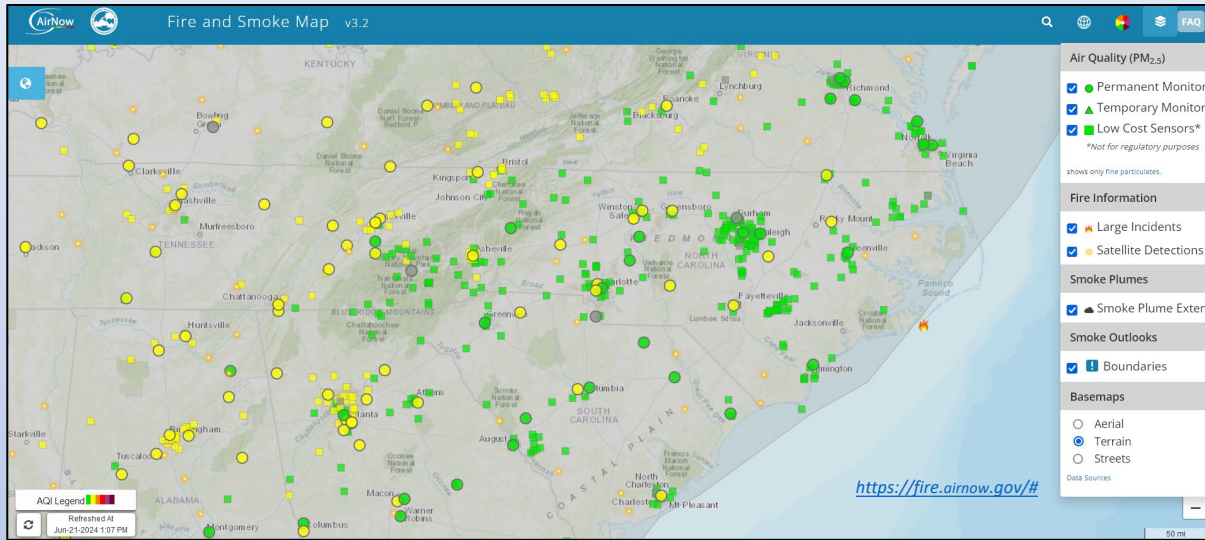


Wednesday > 75<sup>th</sup> Percentile



- 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
- **No Account of Local Fuel Conditions & Topo Influences**

# Air Quality Notes



## Forecast Discussion

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

View:  The latest forecast discussion  The **afternoon** forecast discussion from Jun 20, 2024

This forecast was issued on **Thursday, June 20, 2024 at 3:52 pm.**  This forecast is currently valid.

### Today's Air Quality Conditions

Current daily average fine particulates are in the Code Yellow range across the Triad and in parts of the Charlotte metro area. Ozone has risen into the Code Yellow range in the Triad but Code Green conditions are holding elsewhere across the state.

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

### General Forecast Discussion

Surface high pressure will remain centered to our east off the coast on Thursday and will continue to bring an east-southeast flow across the state. The center of an H5 high aloft will begin to drift southward from over the Ohio River Valley to over Tennessee. This will promote less clouds during the day and also aid in elevating surface temperatures a few degrees higher Thursday afternoon as H85 temperatures begin to increase. Thus, ozone levels are expected to increase into the Code Yellow range for much of the Piedmont. Fine particulates will average in the low Code Yellow range across the interior as ESE winds push accumulated particle pollution westward.

### Outlook

H85 temperatures will continue to increase through the weekend which will lead to a hot weekend across much of the state. High pressure off of the coast will slowly drift southward, helping to turn surface winds to more SSW. Return flow around the high pressure will help bring a push of higher moisture air into the southern part of the state on Saturday, and then even further north on Sunday. This, in combination with a weak upper-level trough developing over the eastern U.S. can lead to a few more clouds and possibly some scattered afternoon showers and thunderstorms Sunday afternoon. Fine particulates are expected to remain in the Code Yellow range across the interior through the weekend. Ozone concentrations will continue to build through Saturday due to rising temperatures and fewer clouds but may lower slightly on Sunday with more cloud coverage and increased mixing. This will be monitored and fine-tuned as trends become clearer.

Author: Root - NC Division of Air Quality

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

# ENSO Notes from the CPC (6/13/24 Update)

## ENSO Alert System Status: **Final El Niño Advisory** / **La Niña Watch**

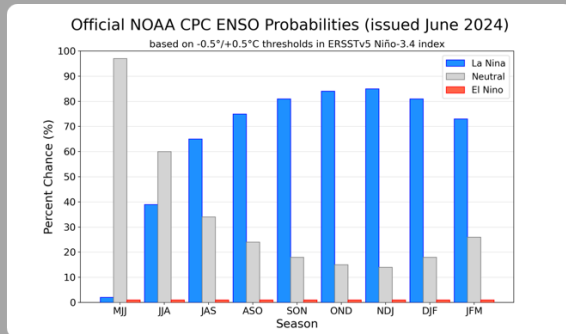
ENSO-neutral conditions are present. La Niña is favored to develop during July-September (65% chance) and persist into the Northern Hemisphere winter 2024-25 (85% chance during November-January).

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

### CPC Probabilistic ENSO Outlook

Updated: 13 June 2024

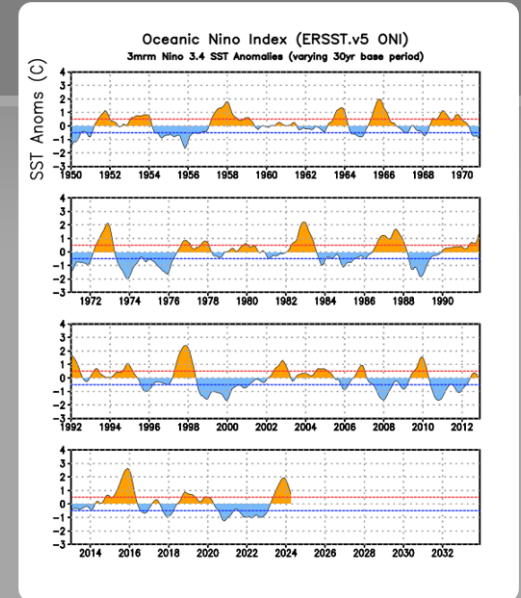
ENSO-neutral is favored in May-July and June-August 2024. La Niña may develop in July-September (65% chance) and persist through Northern Hemisphere winter 2024-25.



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

The most recent ONI value (March - May 2024) is  $0.7^{\circ}\text{C}$ .

El Niño ↑  
Neutral  
La Niña ↓

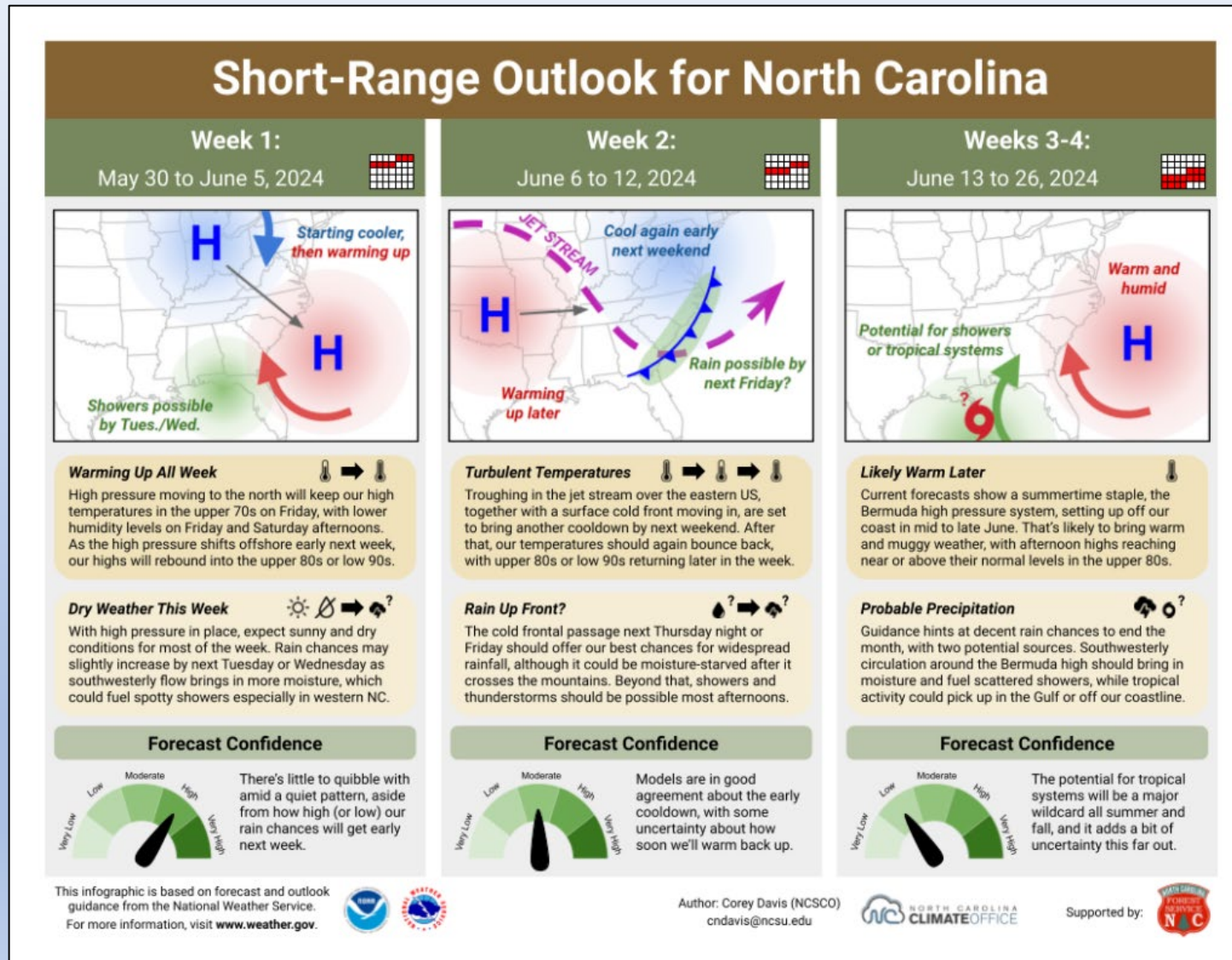


From the most recent CPC Diagnostic Discussion ([ENSO Diagnostics Discussion](#)):

[The most recent IRI plume indicates La Niña may develop during July-September 2024 and then persist through the Northern Hemisphere winter [Fig. 6]. The forecast team is also favoring the development of La Niña during July-September because the rate of cooling has slowed since last month. The team still favors La Niña to emerge sometime during the summer months, given the persistent below-average subsurface ocean temperatures and changes in the tropical atmospheric circulation. In summary, ENSO-neutral conditions are present. La Niña is favored to develop during July-September (65% chance) and persist into the Northern Hemisphere winter 2024-25 (85% chance during November-January; [Fig. 7]).]

# State Climate Office: Short-Range Monthly Outlook for NC

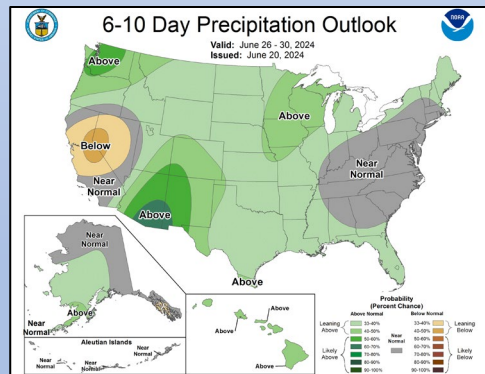
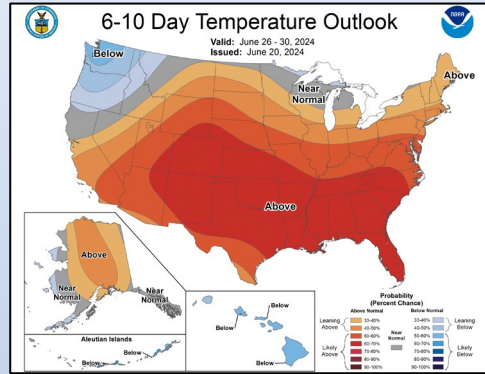
Released **5/30/24** & Location: <https://climate.ncsu.edu/fire/outlooks/>



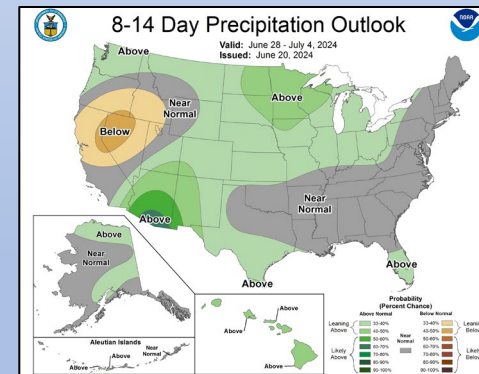
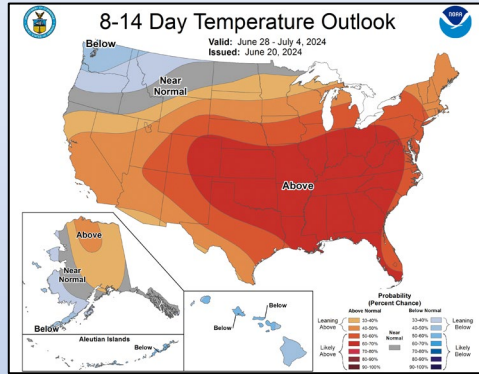
# CPC Temp & Precip Outlook

6-10 Day, 8-14 Day, Week 3-4, Monthly

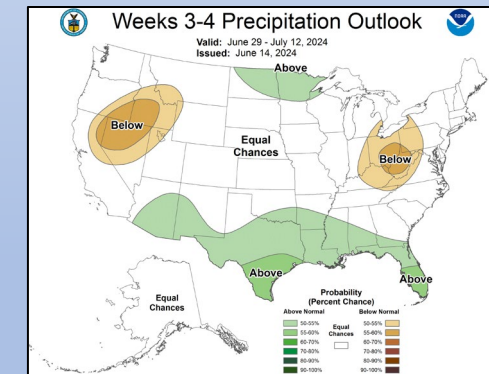
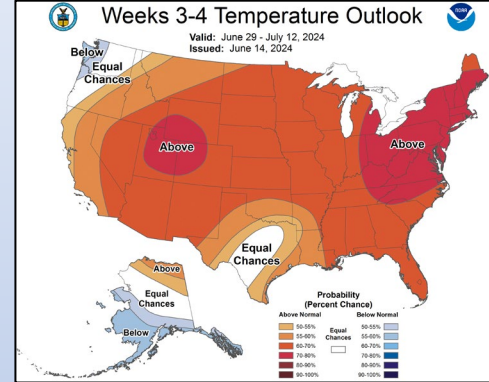
Updated 6/20/24



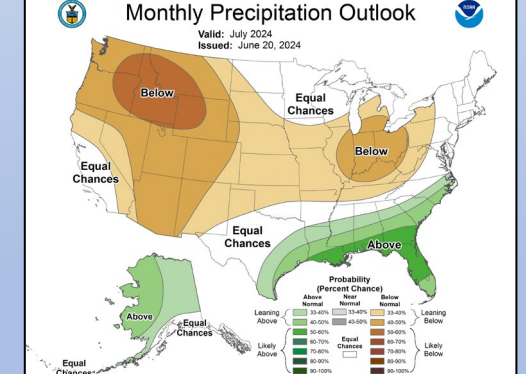
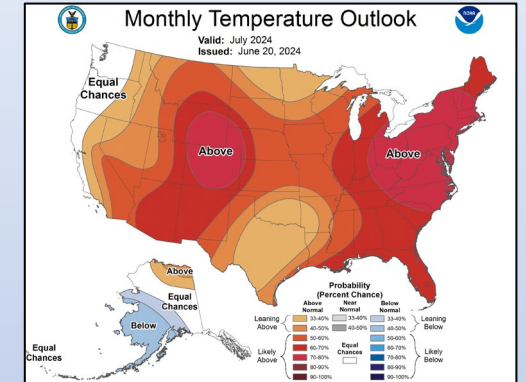
Updated 6/20/24



Updated 6/14/24



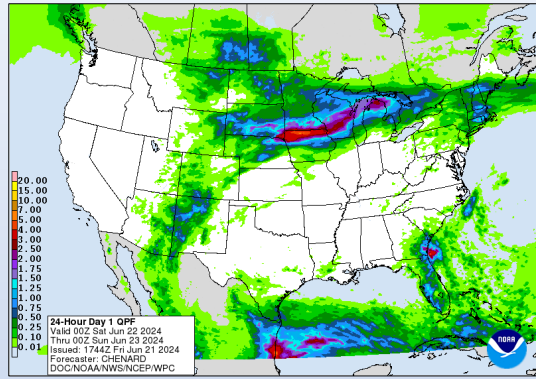
Updated 6/20/24 – [Discussion Link](#)



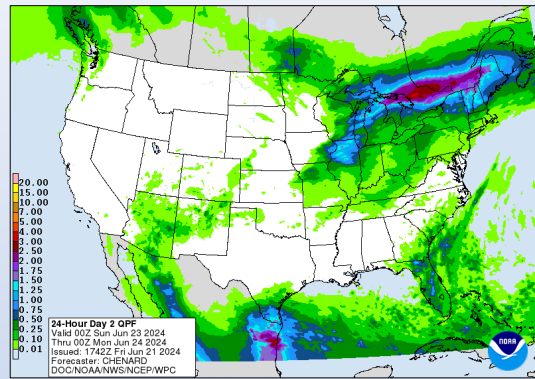
# Quantitative Precipitation Forecast, 7-Day

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

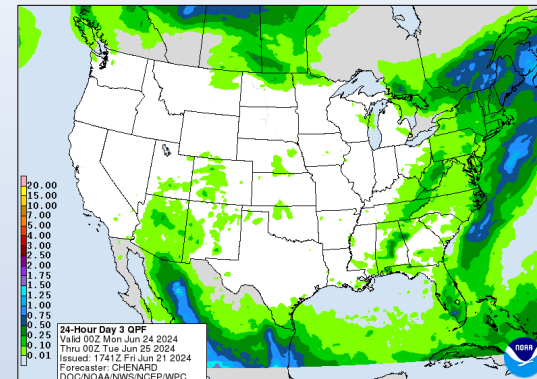
Day - 1



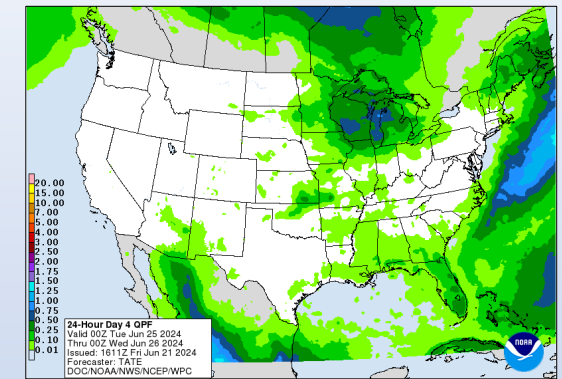
Day - 2



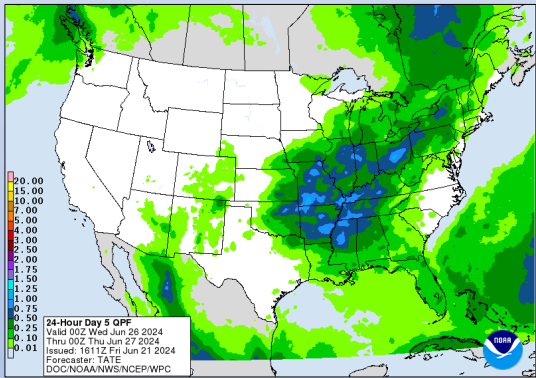
Day - 3



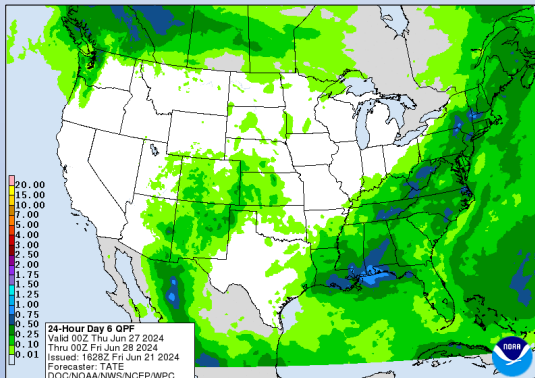
Day - 4



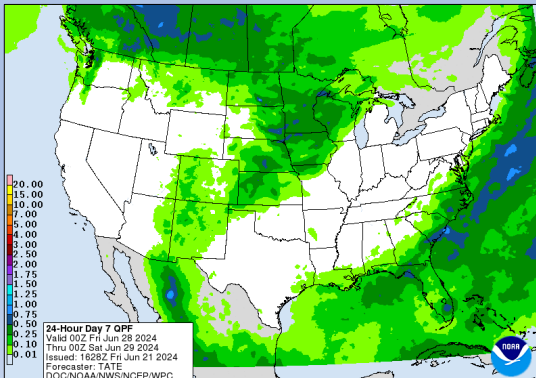
Day - 5



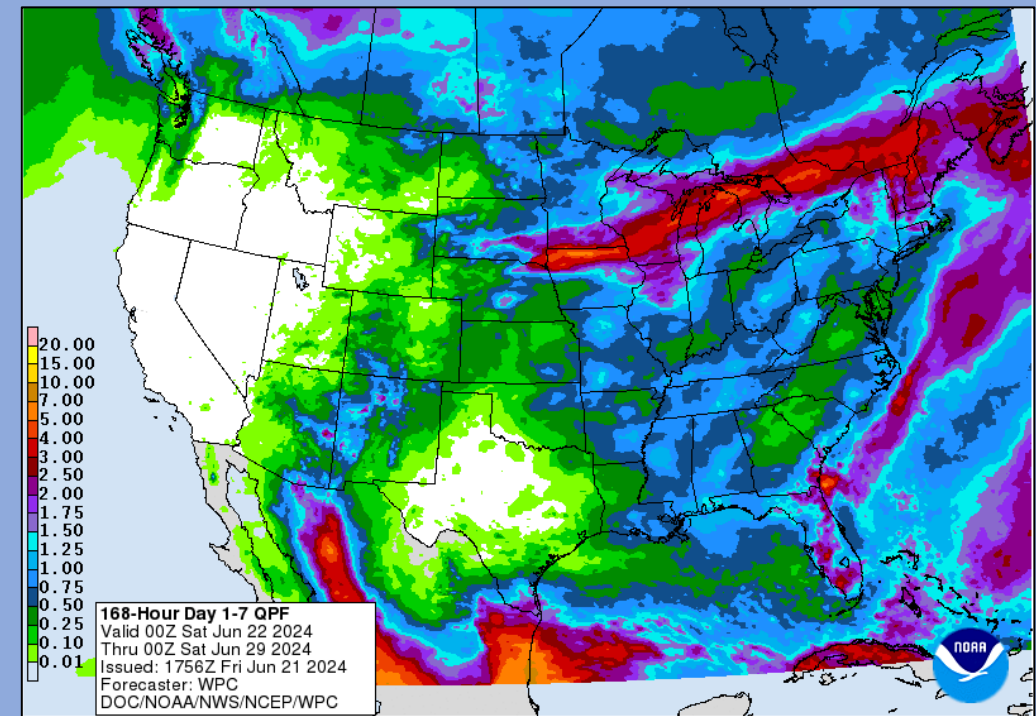
Day - 6



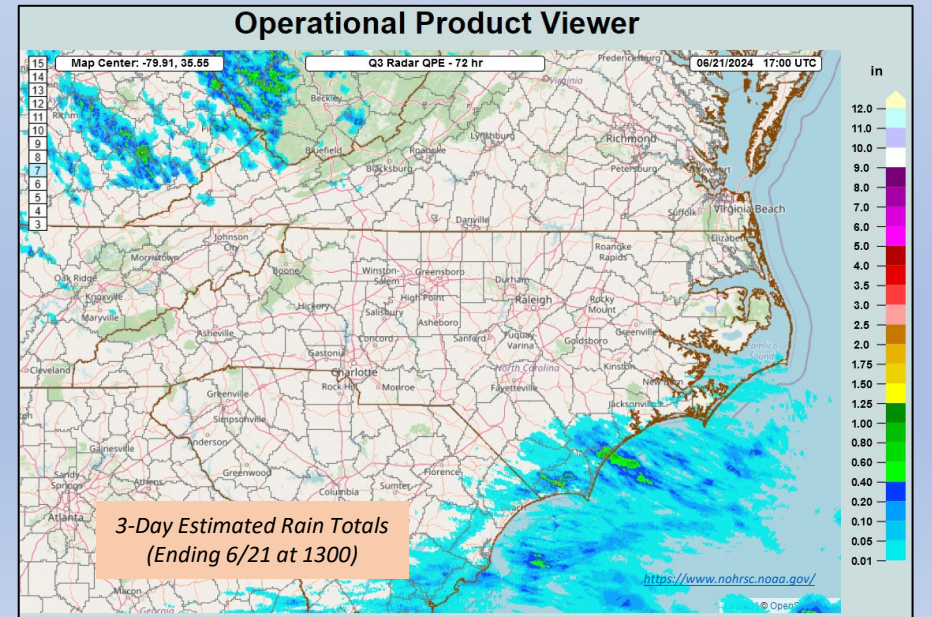
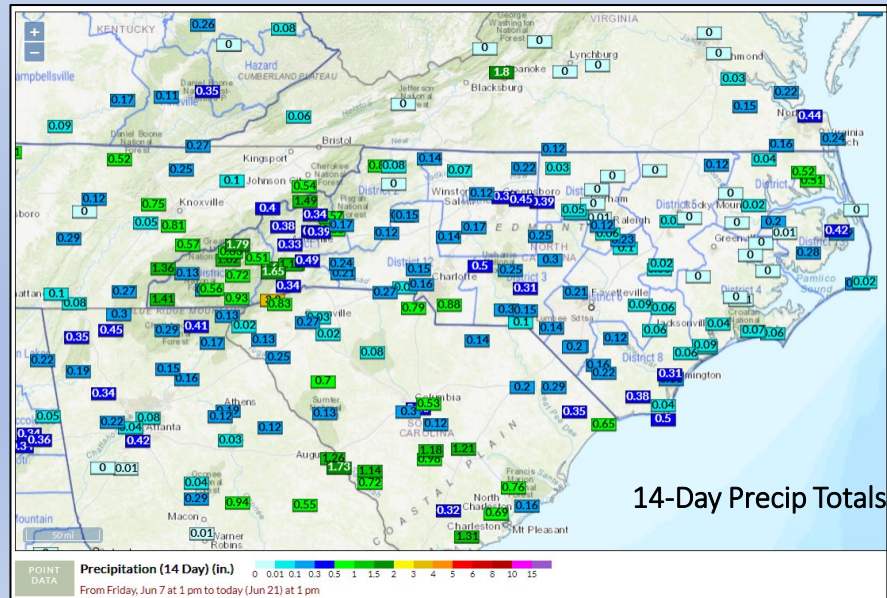
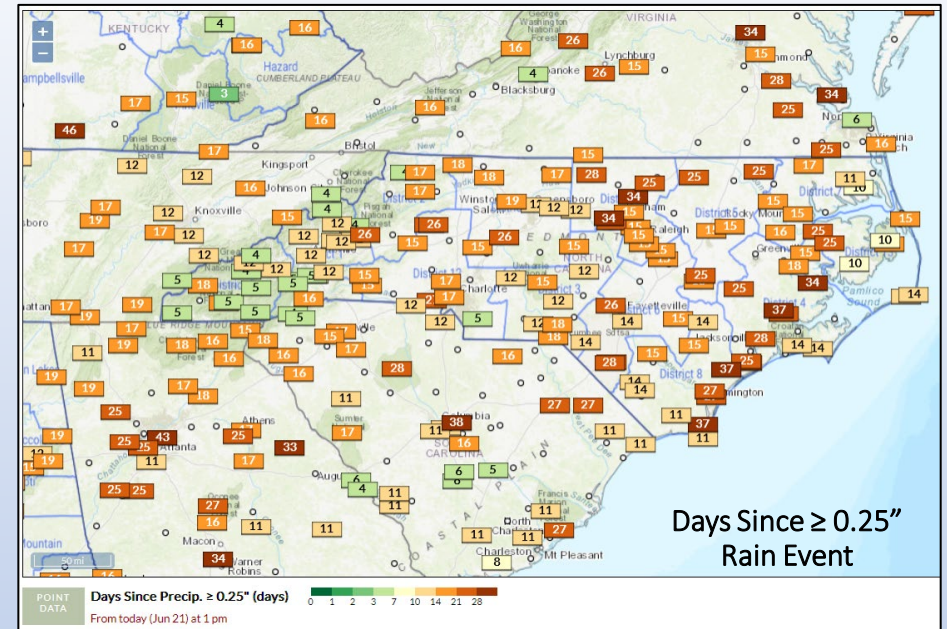
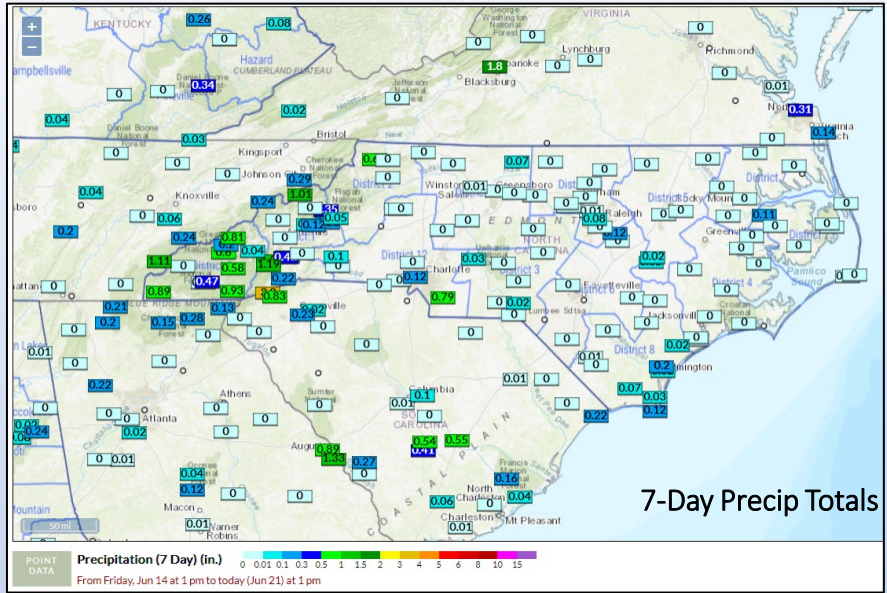
Day - 7



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

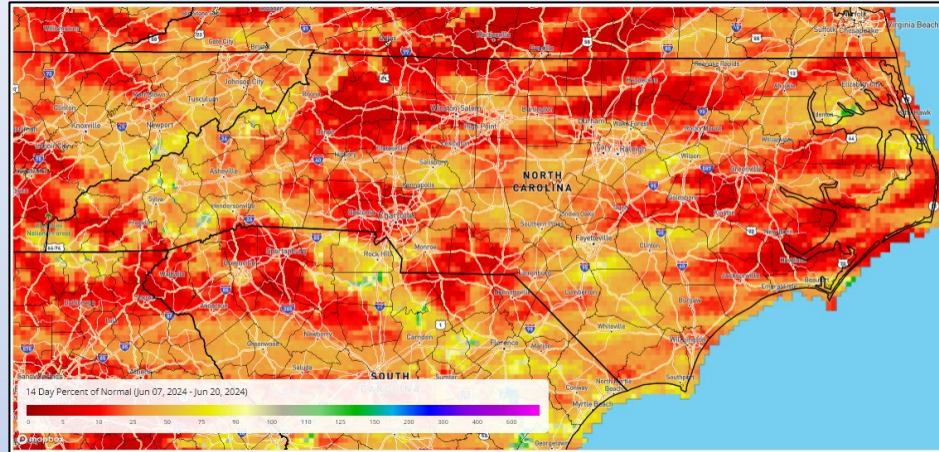


# Observed Precipitation

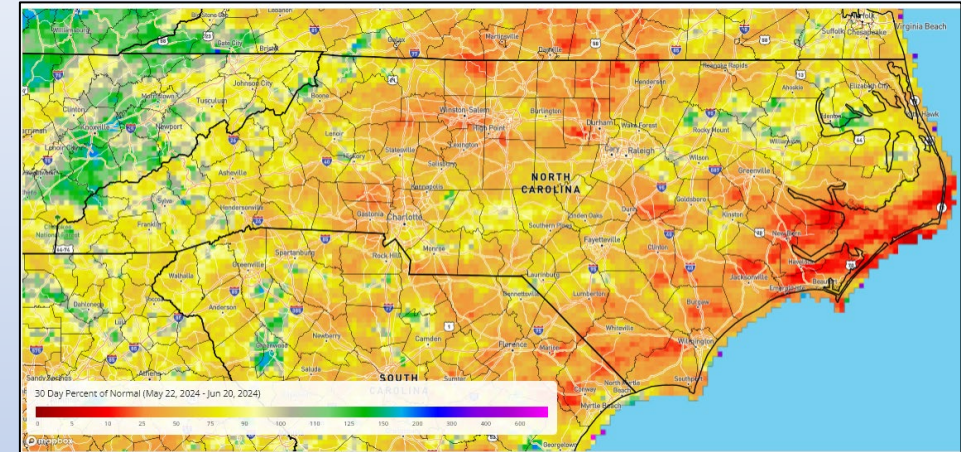


# Percent of Normal Precip, SRCC *(Ending Thursday, 6/20)*

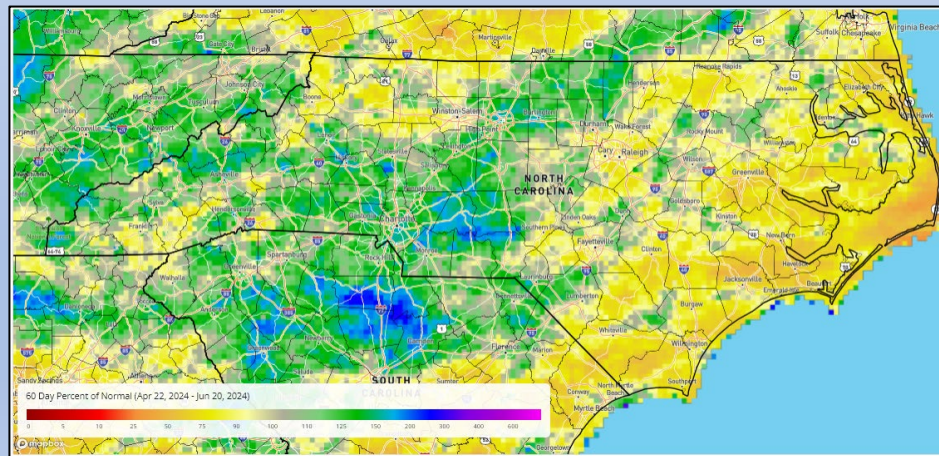
14-Day % of Normal



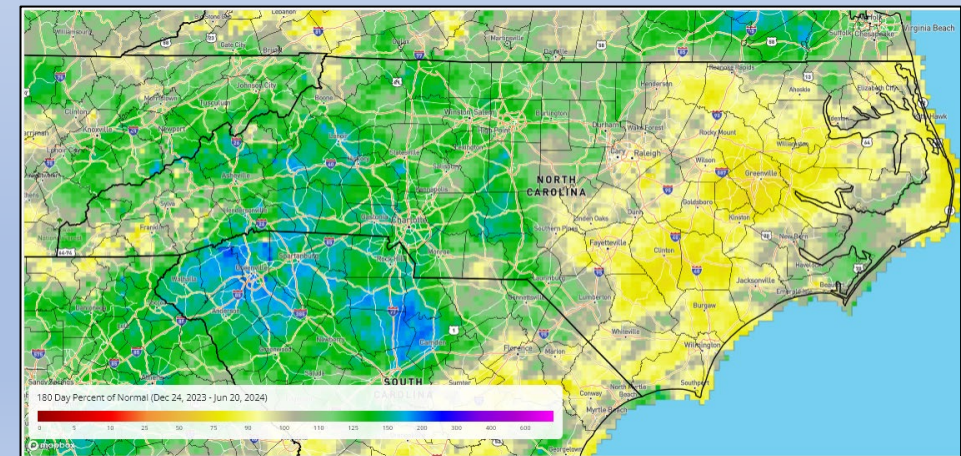
30-Day % of Normal



60-Day % of Normal



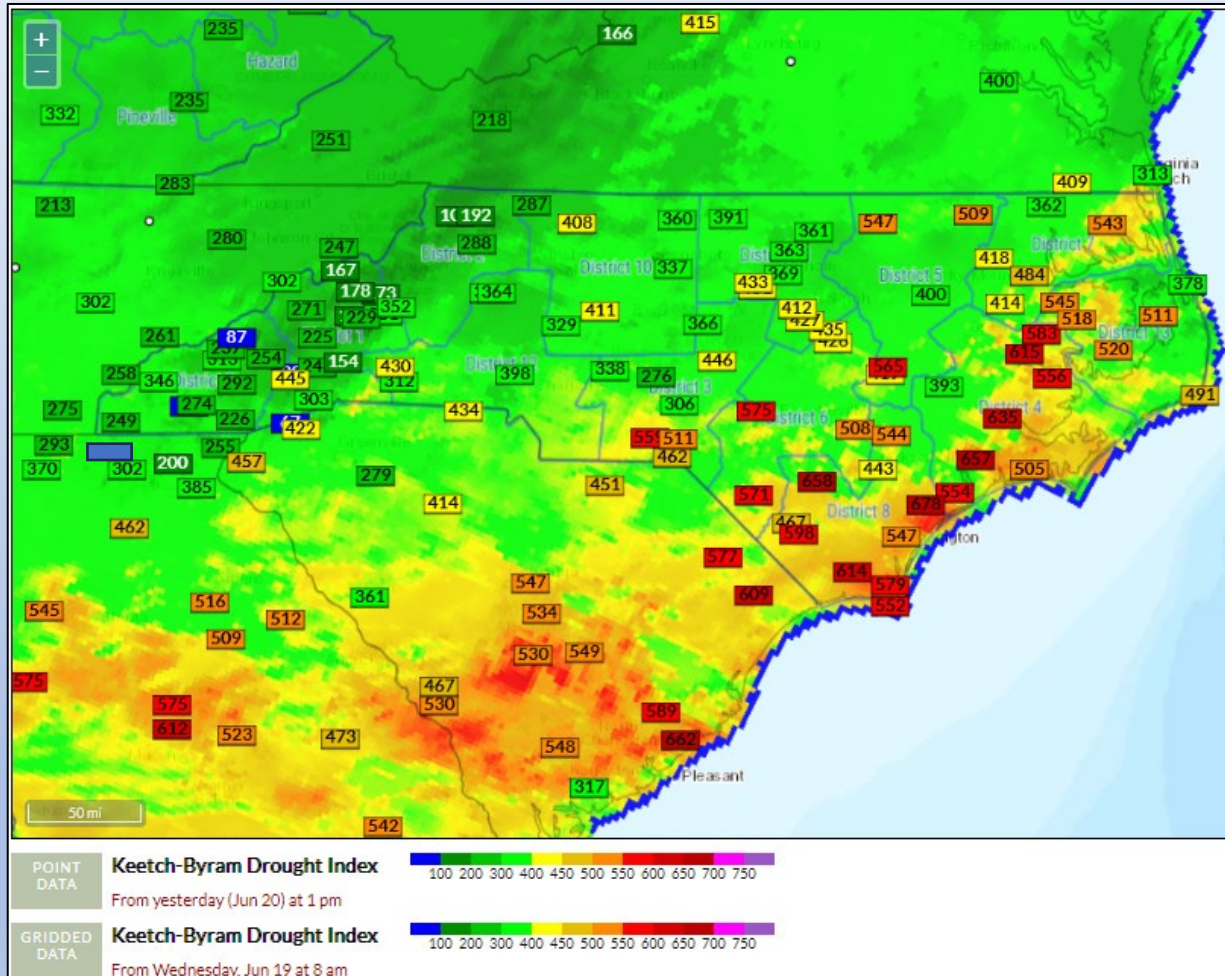
180-Day % of Normal



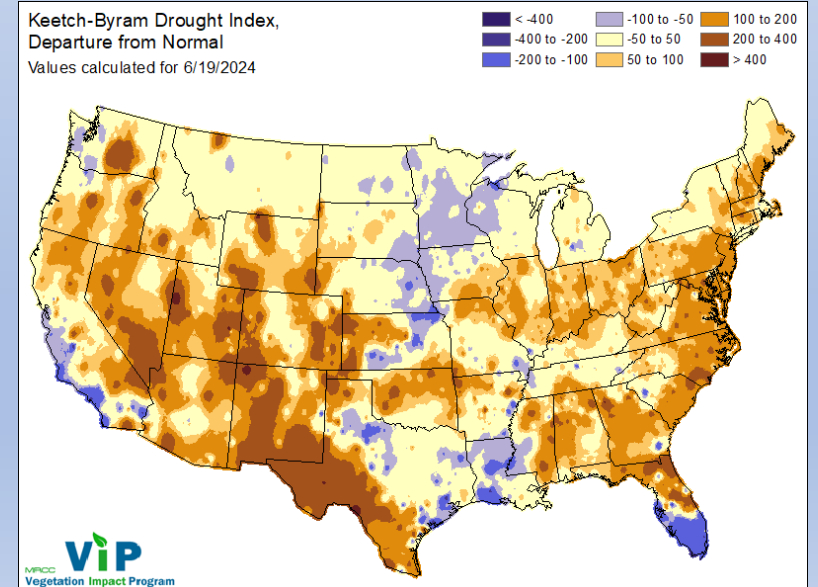
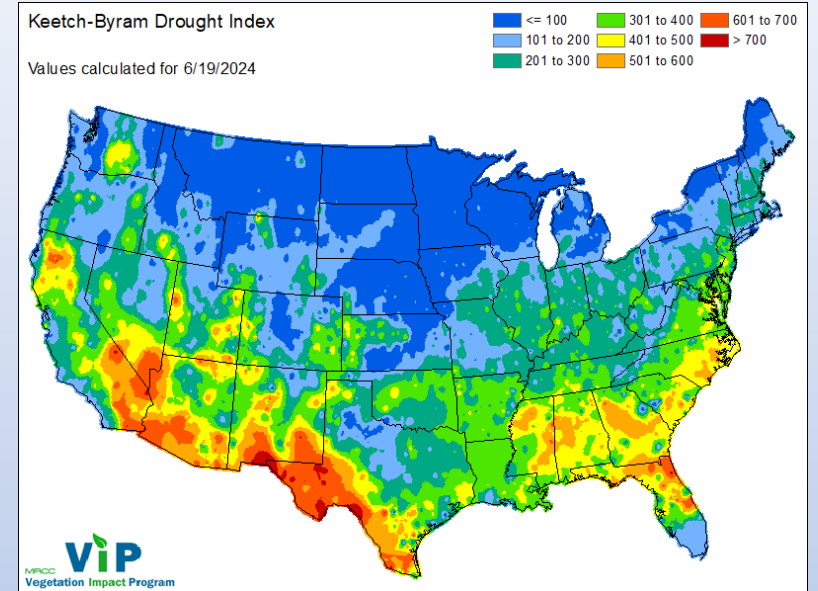


# KBDI - Gridded & Station Points

FWIP (Point calculation from WIMS @ 1300 on 6/20, SCO created Grid on 6/19 @ 0800)



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](http://www.ncdrought.org)

NORTH CAROLINA  
CLIMATE OFFICE  
[climate.ncsu.edu](http://climate.ncsu.edu)

NC STATE  
@NCSCO

For the assessment period ending **June 18, 2024**

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

### The Main Takeaway

Another week of hot weather and limited rain pushed more than half the state into Abnormally Dry (D0) conditions, with concerns growing about flash drought.

### This Week's Summary

Over the past two weeks, our dryness has evolved from a symptom of the summer season into an increasing impact, especially for farmers as crops such as corn and soybeans reach moisture-critical phases in their development. Low streamflows and wildfire danger are common in the southern Coastal Plain, where some areas haven't seen significant rainfall since May 14.

### Next Week's Outlook

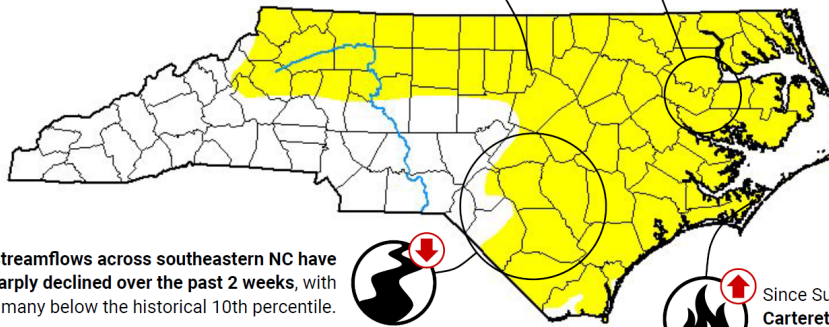
Temperatures will reach the upper 90s this weekend with little relief in sight next week. Scattered showers are possible Monday as a weak front dips southward.

For your local drought status, visit [www.ncdrought.org](http://www.ncdrought.org)

Because of a lack of rainfall, higher evaporation, and limited releases from Durham's reservoirs, **net inflows into Falls Lake are essentially zero** so far this month.



Martin and Washington County Extension report **corn is suffering and in need of moisture** after several hot, dry weeks.



**Streamflows across southeastern NC have sharply declined over the past 2 weeks**, with many below the historical 10th percentile.



Since Sunday, a **wildfire in Carteret County has burned 550 acres** and is now 90% contained.

### Last Week's Drought Status



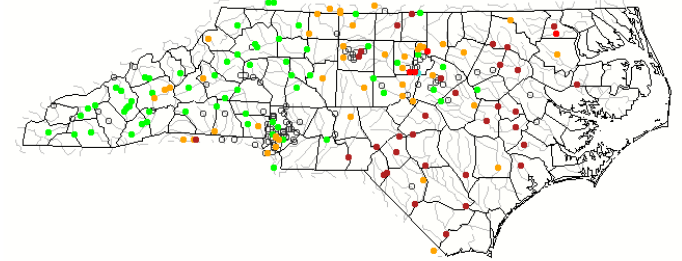
### Statewide Coverage by Category

Category	Current Coverage	Change Since Last Week
D0: Abnormally Dry	65.39%	+60.88%
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%

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

North Carolina or Water-Resources Regions All Days

Thursday, June 20, 2024



USGS

Search USGS streamgage

Choose a data retrieval option and select a location on the map  
 List of all stations  Single station  Nearest stations

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

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

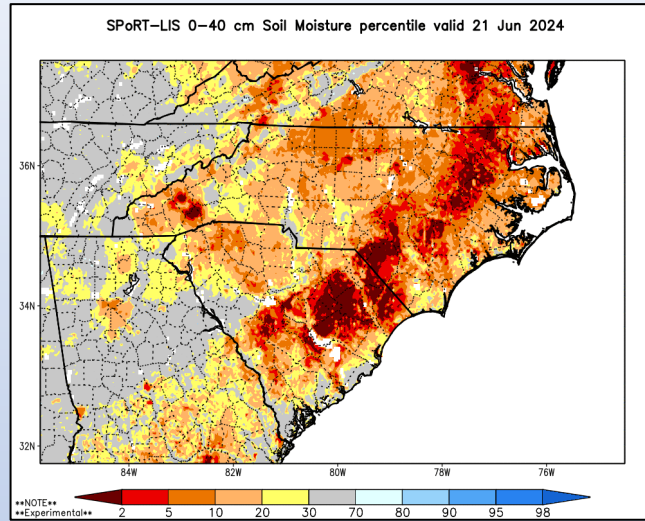
Note continued decline in streamflow values (see above).

61% area increase in D0 Abnormally Dry conditions (see left).

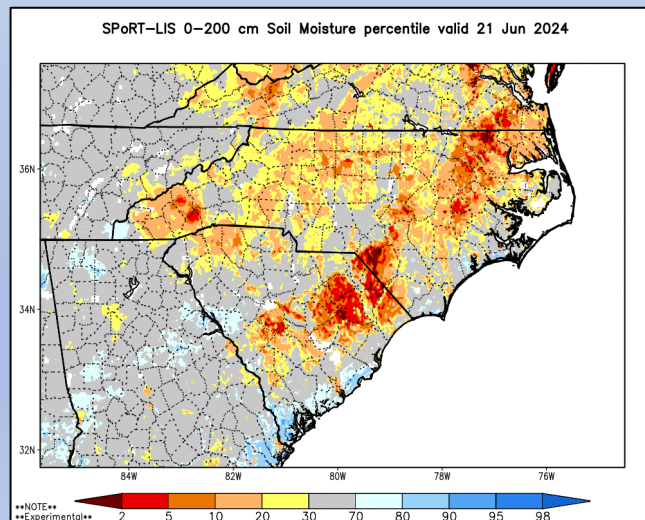
See notes on Slide #6 concerning CPC drought related discussion.

# SPoRT Modeled Relative Soil Dryness

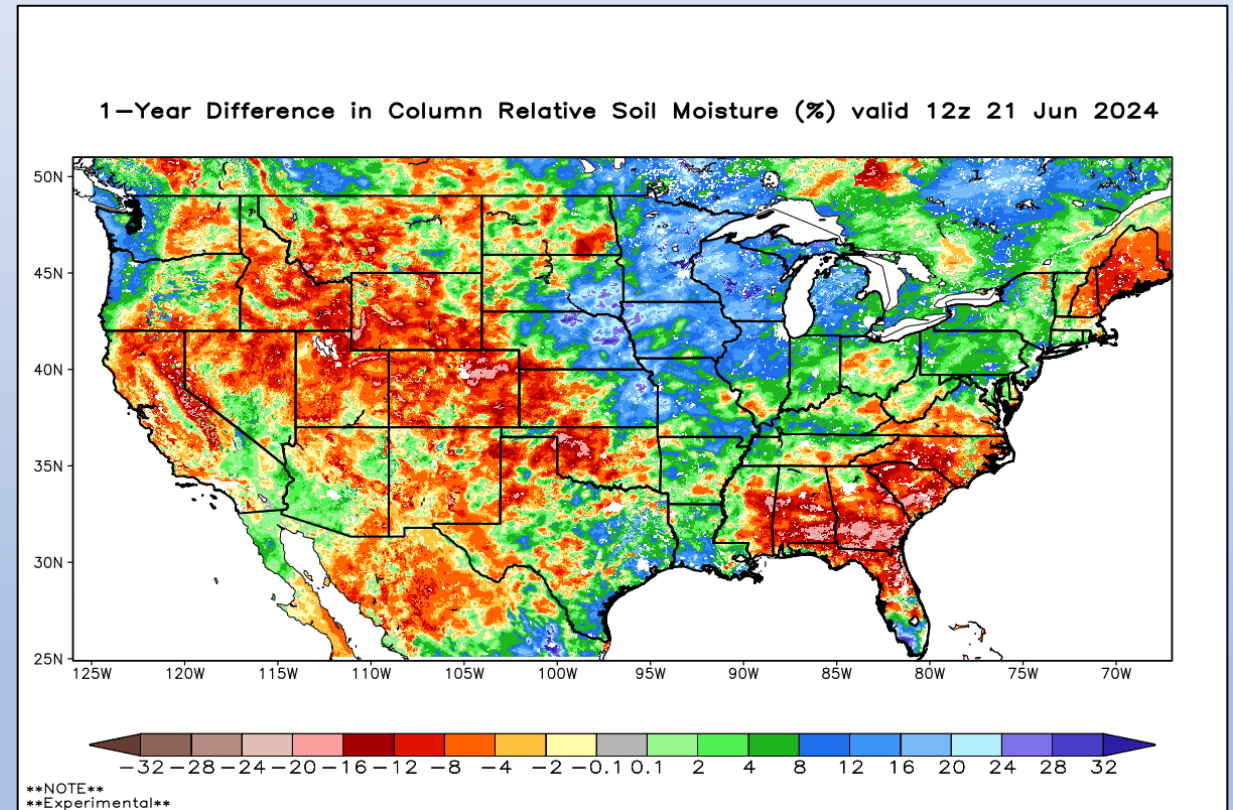
## 0-40 cm Depth



## 0-200 cm Depth

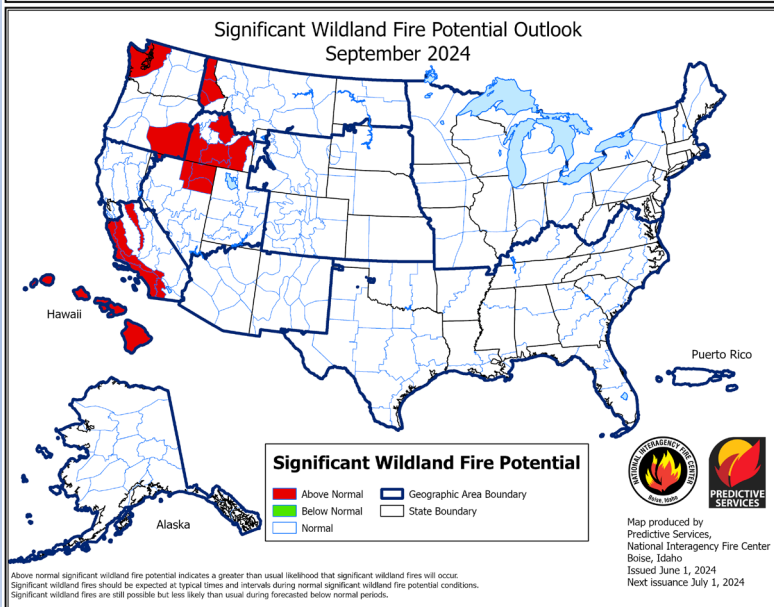
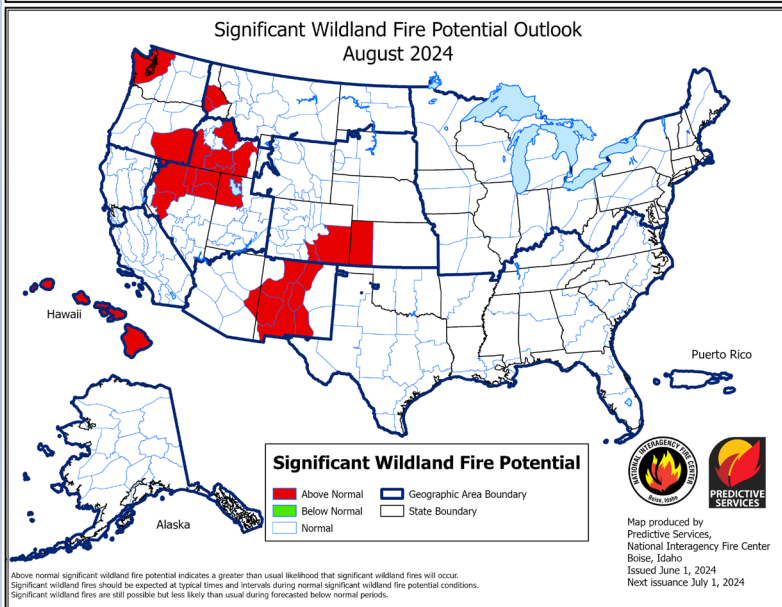
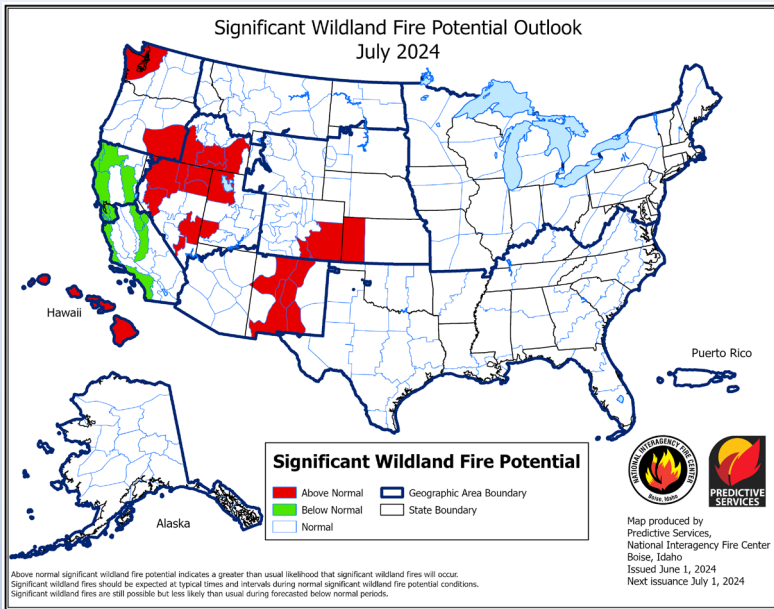
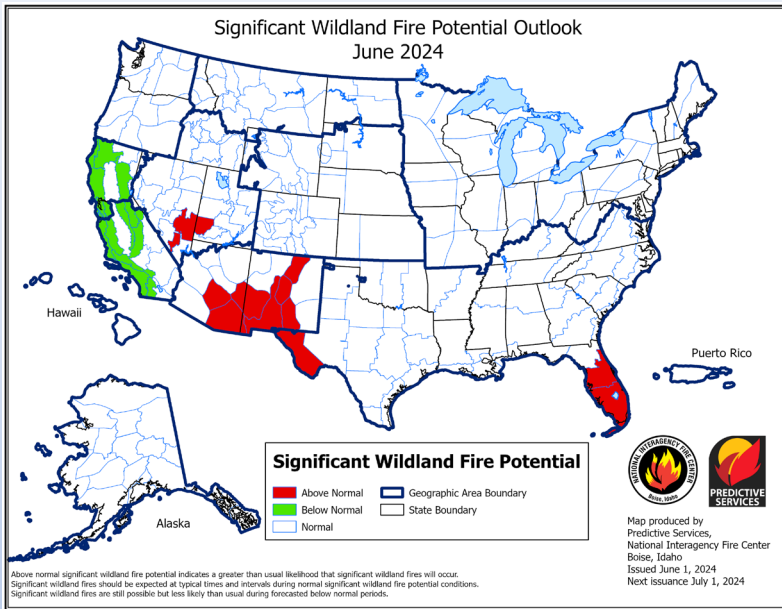


- See areas of modeled degradation near the surface and for the entire soil profile (left). Note the modeled differences between today & last year at this same time.



# Significant Wildland Fire Potential Outlook:

Updated 6/1/24 – Next Update on 7/1/24



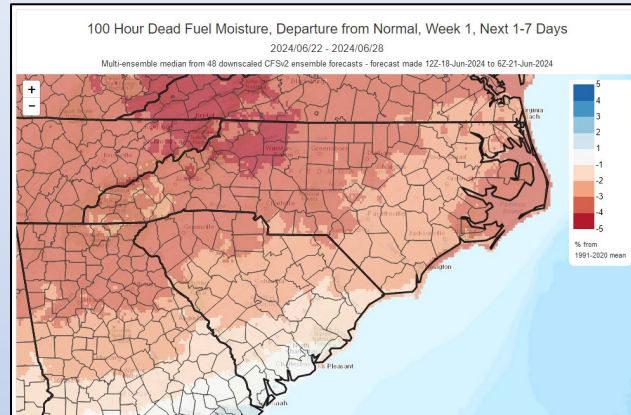
*A significant fire is one that requires resources from outside the district (other than aviation). IA potential is based more on shorter term weather factors. Just a few days of dry weather can increase IA activity considerably as we have seen this year.*

**\*Forecast uncertainty could easily lead to an expansion of "Above Normal" Fire Potential if abnormally dry conditions expand/worsen going through the rest of June.**

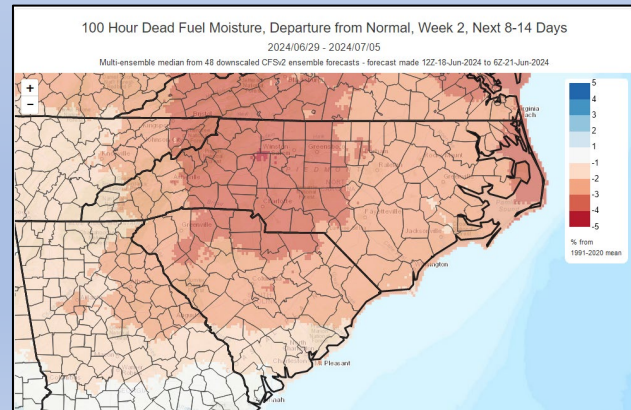
# Modeled Departure from Normal by Week: 100-hr Fuels

*Output relies on experimental forecast outputs and is subject to change*

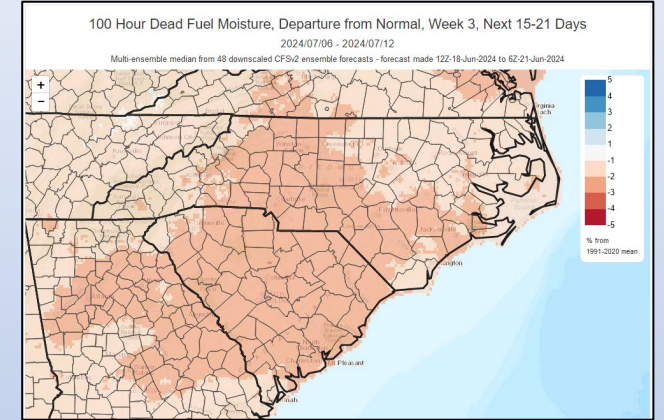
## Week-1



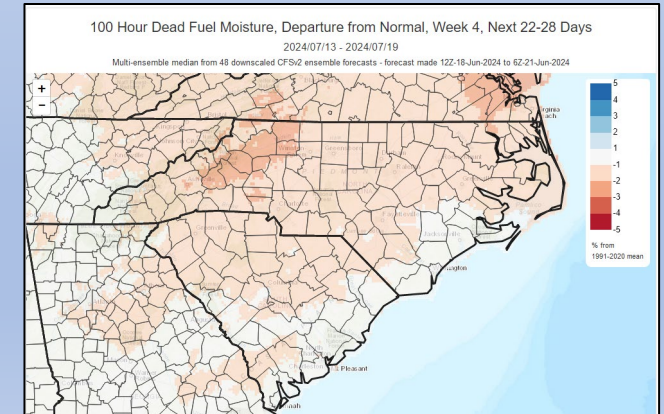
## Week-2



## Week-3



## Week-4



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.

Note much drier than normal conditions continue through Weeks 1-2 for most of the state. Weeks 3-4 show potential for fuel moistures to return closer to normal.

Relates to interactions of warmer/colder temps, moist/dry air masses, precip amt/duration and overnight RH recovery trends.

*Important to note that there is significant forecast uncertainty as you go further out in time.*