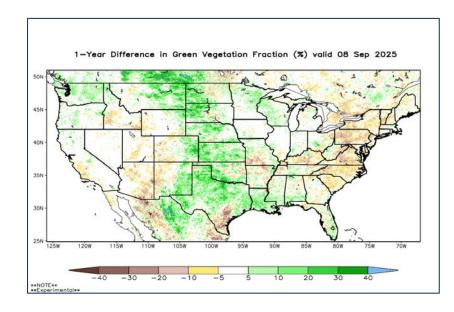
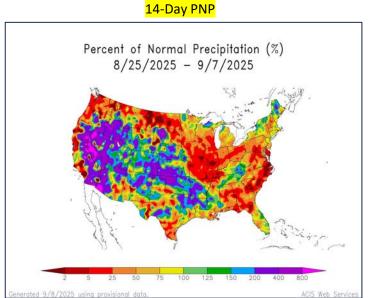
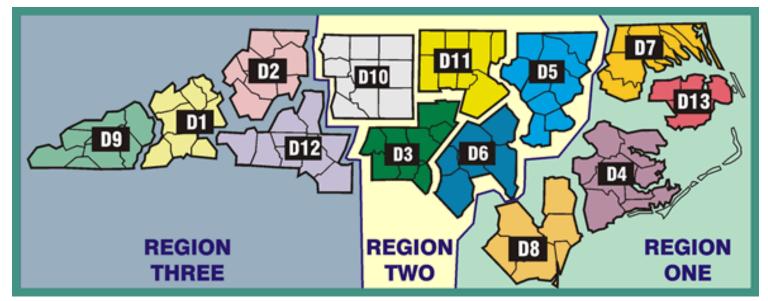
# September - 2025

# Monthly Fire Danger Assessment NCFS – All Regions







Date: September 9, 2025

### **Statewide Wildfire Context**

January: 10-yr avg is 309 fires for 530 acres
February: 10-yr avg is 618 fires for 1,598 acres
March: 10-yr avg is 891 fires for 4,784 acres
April: 10-yr avg is 629 fires for 6,546 acres
May: 10-yr avg is 293 fires for 1,161 acres
June: 10-yr avg is 243 fires for 2,424 acres
July: 10-yr avg is 193 fires for 645 acres

\*August: 10-yr avg is 138 fires for 395 acres
\*September: 10-yr avg is 173 fires for 377 acres

October: 10-yr avg is 236 fires for 1,962 acres
November: 10-yr avg is 462 fires for 6,035 acres
December: 10-yr avg is 305 fires for 580 acres

-----

September MTD: 85 incidents for 242.2 acres 7-Day Activity: 68 incidents for 233.6 acres

\*All wildfire activity data is preliminary\*

Does not include additional federal wildfires/acres

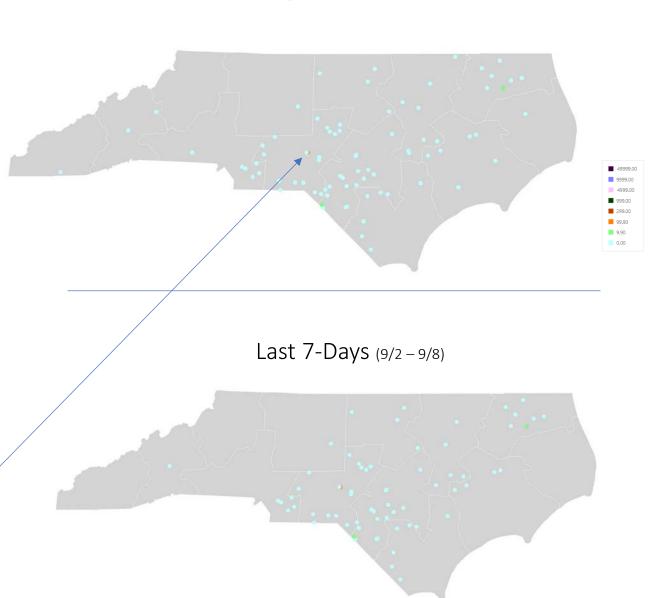
2015-2024 CY Average

\*\*Largest incidents by discovery date in August:

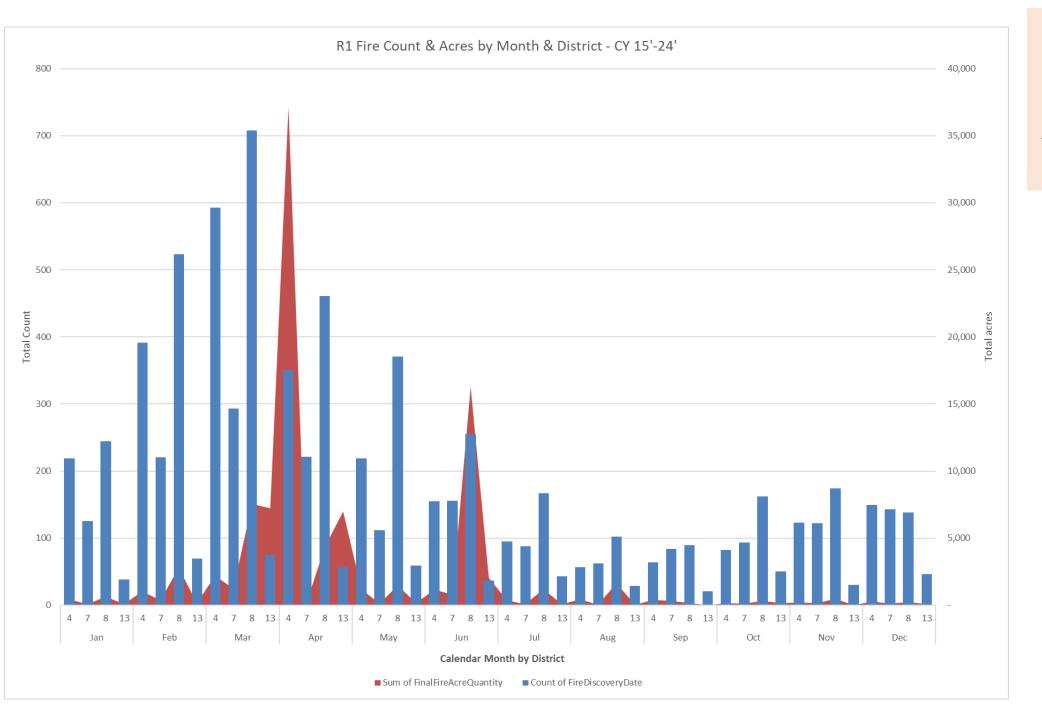
<sup>\*</sup>from fiResponse & preliminary reporting only\*

Incident Name	▼ Discovery Date ▼	Region	<b>▼</b> District	<b>▼</b> County	Acres	<b>+</b> ‡
Falls Dr	9/5/2025	Region 2	District 3	Moore County		163.00
Davenport Ln.	9/6/2025	Region 1	District 7	7 Perquimans County		20.00
Eva Rd.	9/3/2025	Region 2	District 6	Robeson County		14.50
State Rd 1105	9/1/2025	Region 2	District 6	Hoke County		5.00
popcorn fire	9/5/2025	Region 2	District 6	Cumberland County		5.00
Dobbins FourWheelrr	9/6/2025	Region 2	District 3	Richmond County		4.00
Bumpy Road Rekindle	9/6/2025	Region 2	District 5	Halifax County		4.00
Old Store	9/8/2025	Region 2	District 3	Chatham County		2.50
Pankeytown Rd	9/4/2025	Region 2	District 3	Scotland County		2.00
Wood Chip	9/3/2025	Region 2	District 6	Robeson County		1.70

### September MTD (ending 9/9 am)

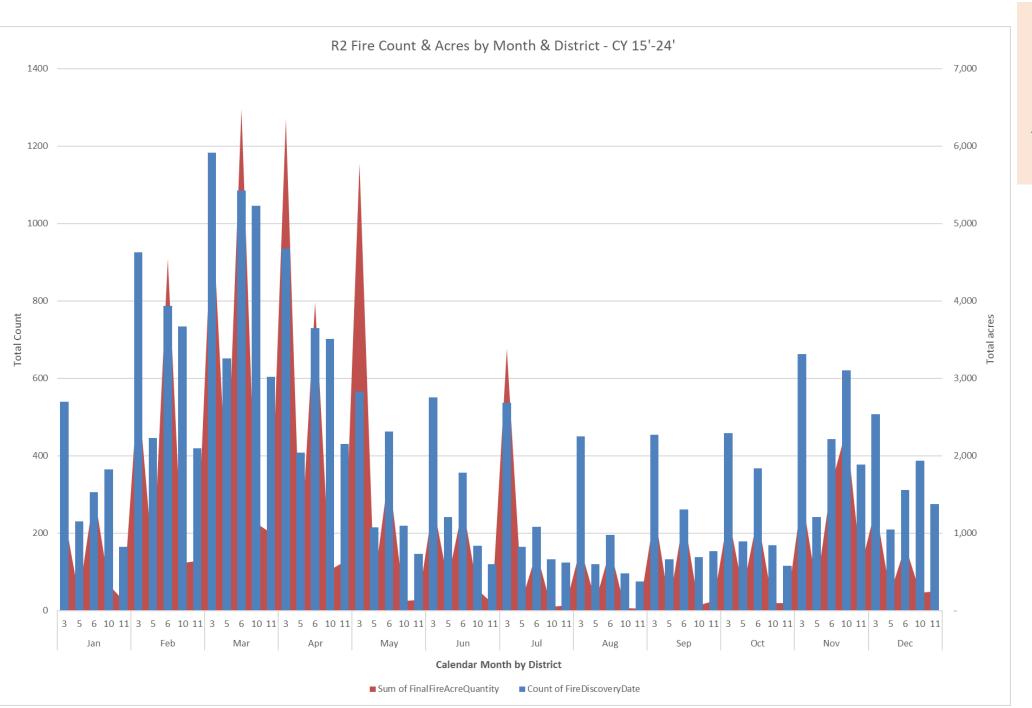


\*\*Note: DOD & other entirely federal ownership wildfires not shown on fiResponse



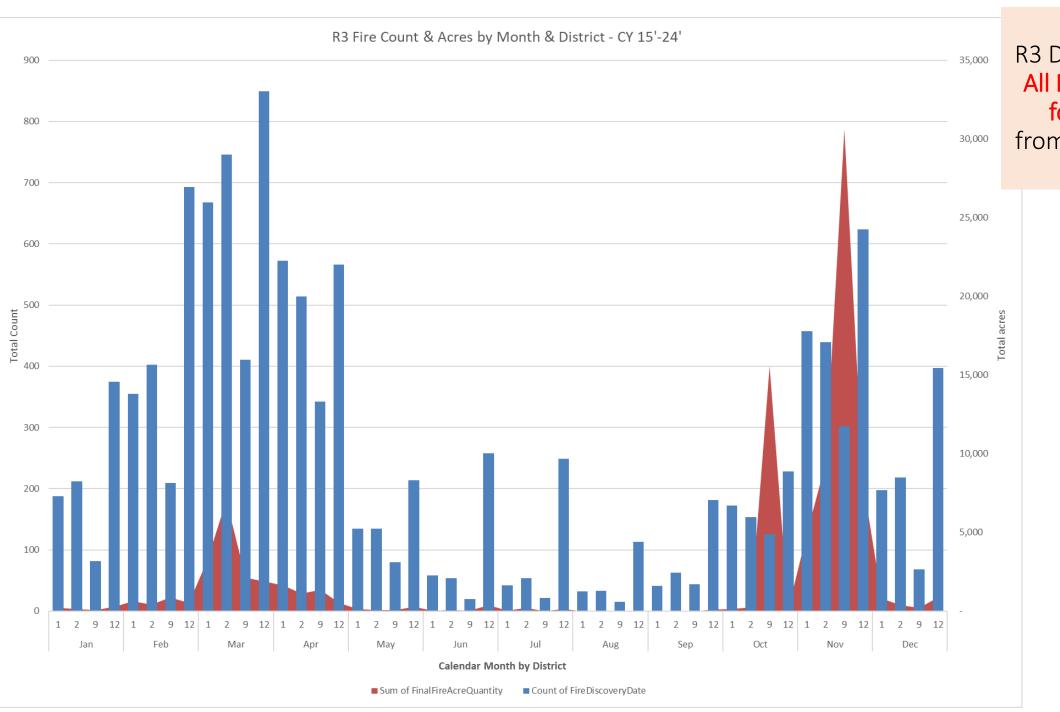
R1 Distribution of All Fires & Acres for Jan-Dec from 2015 - 2024

> Cause: All Cause Codes, Region 1, NCFS Reported Fires Only using FARS NASF Query. Preliminary Data.



R2 Distribution of All Fires & Acres for Jan-Dec from 2015 - 2024

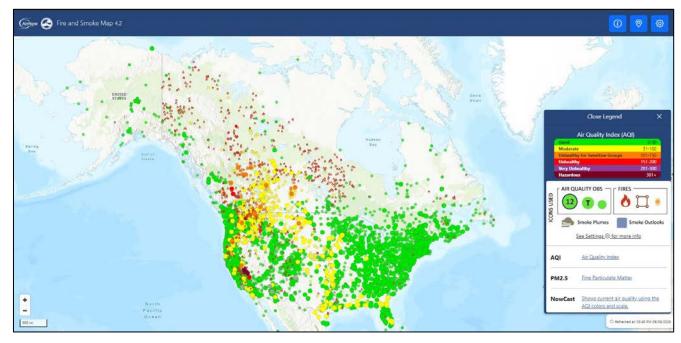
Cause: All Cause Codes, Region 2, NCFS Reported Fires Only using FARS NASF Query. Preliminary Data.



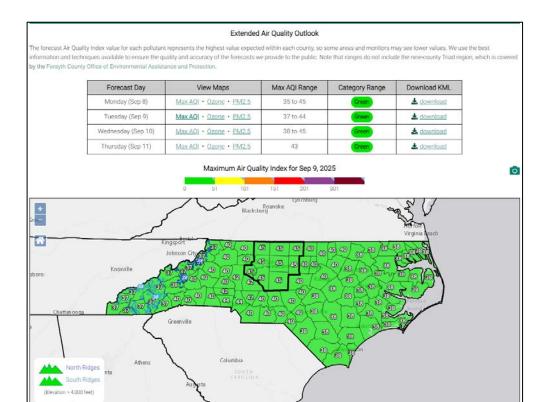
R3 Distribution of All Fires & Acres for Jan-Dec from 2015 - 2024

Cause: All Cause Codes, Region 3, NCFS Reported Fires Only using FARS NASF Query. Preliminary Data.

# Air Quality Notes



https://fire.airnow.gov/#



This forecast was issued on Monday, September 8, 2025 at 2:55 pm. This forecast is currently valid.



### Today's Air Quality Conditions

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

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

### General Forecast Discussion

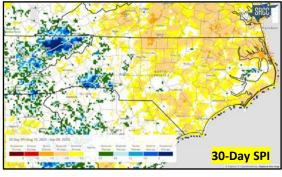
Persistent upper-level troughing and high pressure over New England continue to deliver real fall conditions - nothing false about this as summer shows no signs of returning in

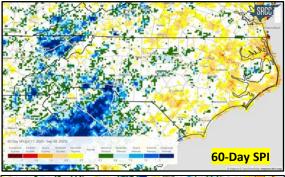
### Outlook

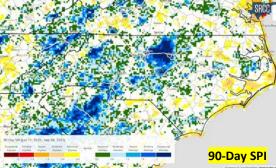
Persistent northeasterly winds through the week will continue to provide gorgeous conditions with cool and dry air. This should keep air quality levels in the Code Green range statewide through the work week.

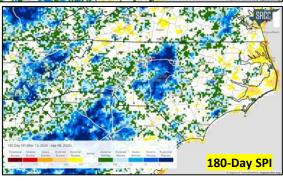
Author: Bradley McLamb (bradley.mclamb@deq.nc.gov) - NC Division of Air Quality

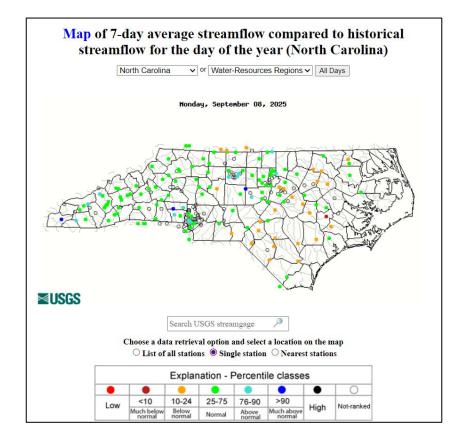
### https://airquality.climate.ncsu.edu/discussion/?view=latest



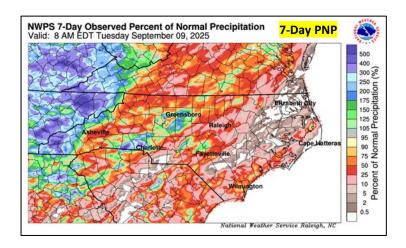


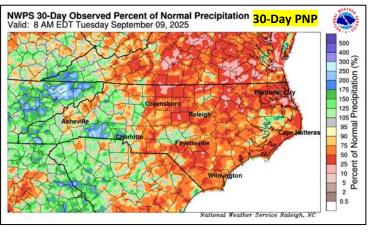


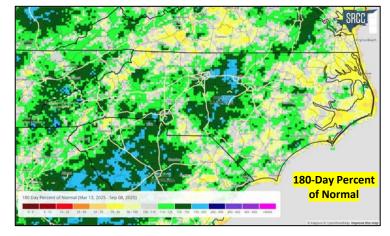




- Note the 7- & 30-day PNP graphics. Significant decrease in precip over the past four weeks for most of state at the 7- & 30-day time scales.
- Streamflow declines becoming evident to the east.
- 30/60 Day SPI showing modeled impact from lack of significant precip (top left).
- 90/180 Day SPI still showing modeled impact of wetter conditions earlier in the period, however dry pockets still exist and will expand as rainfall falls off the analysis periods (left).
- 180-Day Percent of Normal Precip areas in darker yellow represent 75-90% of normal (bottom right).

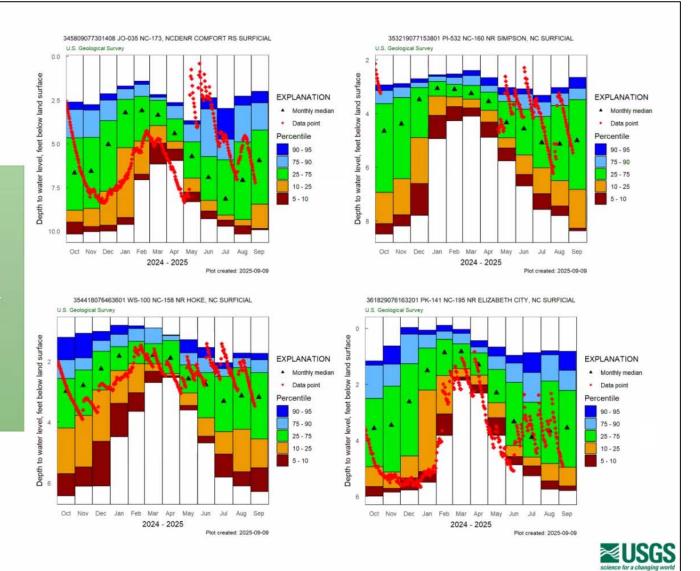






## **Coastal Plain**

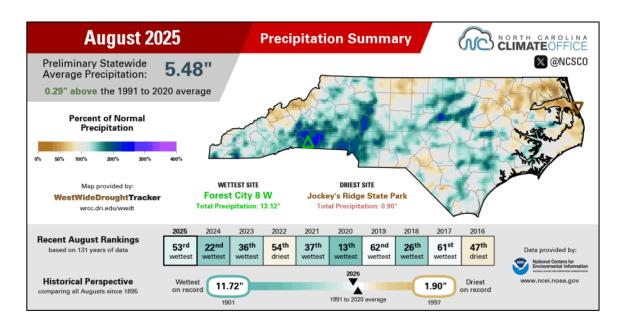
Graph of groundwater levels during the past year and monthly period of record statistics.

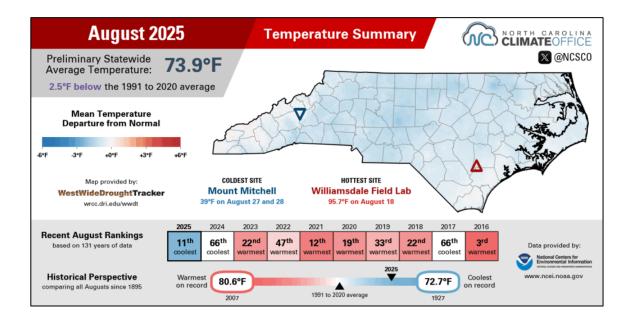


# Statewide August Comparisons

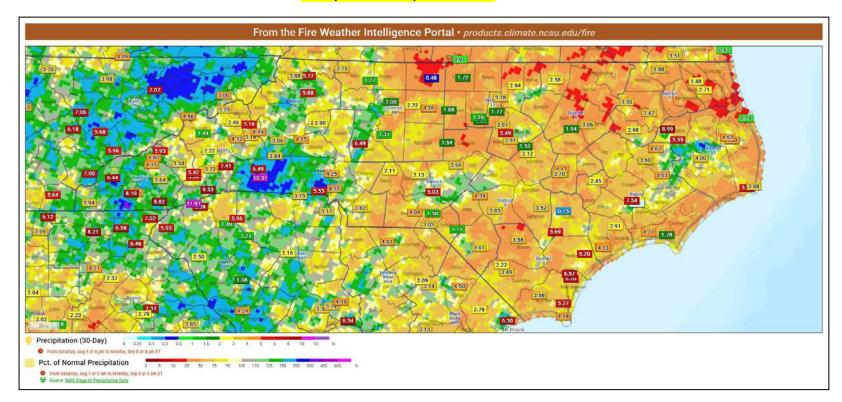
Refer to the NC Climate Office Blog for further discussion

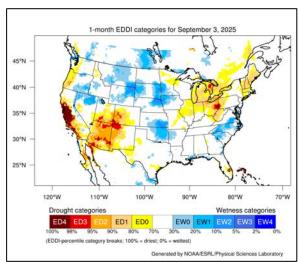
https://climate.ncsu.edu/blog/2025/09/a-fall-like-feeling-arrived-with-mixed-rainfall-in-august/

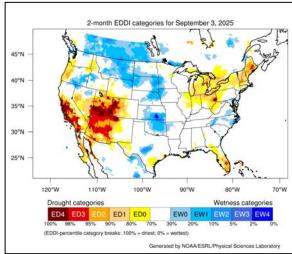




### 30-Day Station Precip Totals & PNP





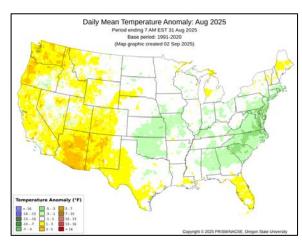


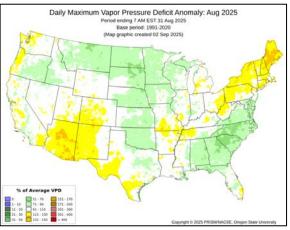
### **August Precip Anomalies**

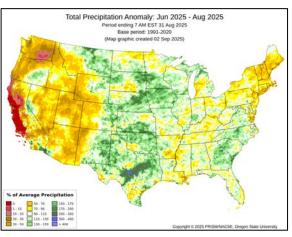
30-Day Precip ranges from ~0.50" to 8.0" + for stations in North Carolina.

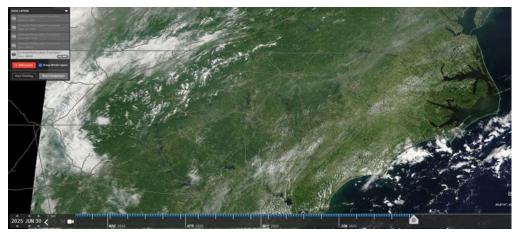
Cooler conditions were seen in August for much of the Southeast. Dryness continues to increase most significantly in western portion of the SA.

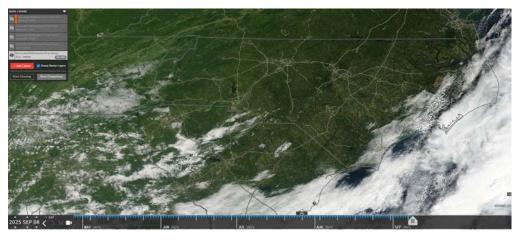
Observed EDDI values for most of NC have been near normal, with some areas averaging much lower evaporative demand (darker blue colors) over the past 1- & 2-month timescales for period ending on 9/3.





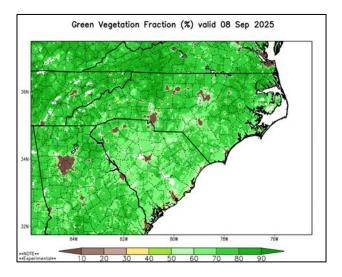


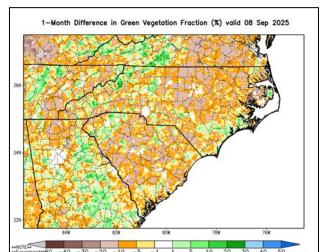


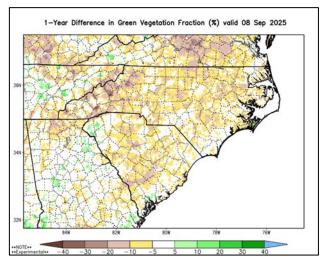


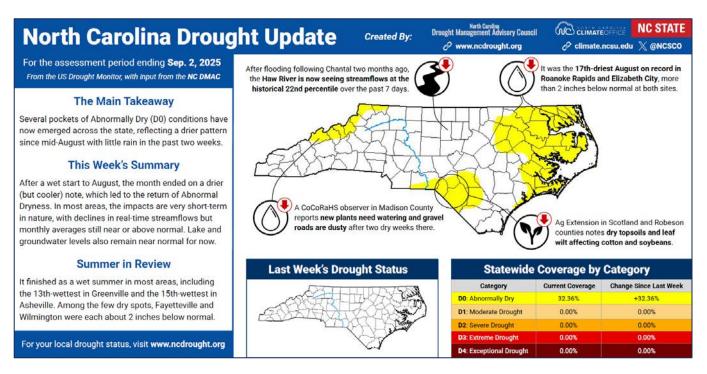
# Green Fraction & Green-Up Anomaly

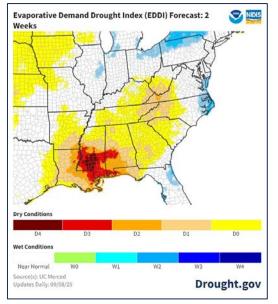
NASA Worldview Maps from Aqua/MODIS and Terra/MODIS sensors on left illustrate monthly true color representation – June 3 (top), June 30 (middle), and September 8 (bottom).

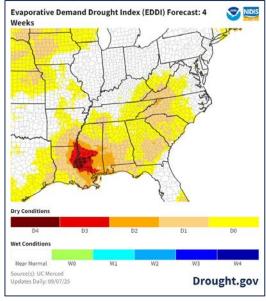










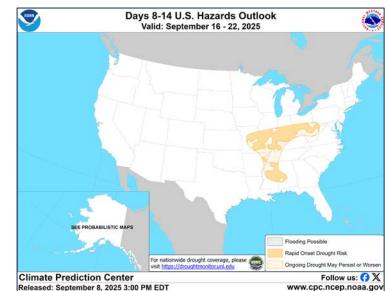


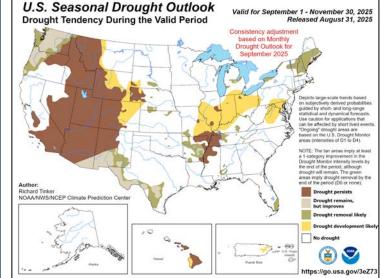
### **EDDI & Drought**

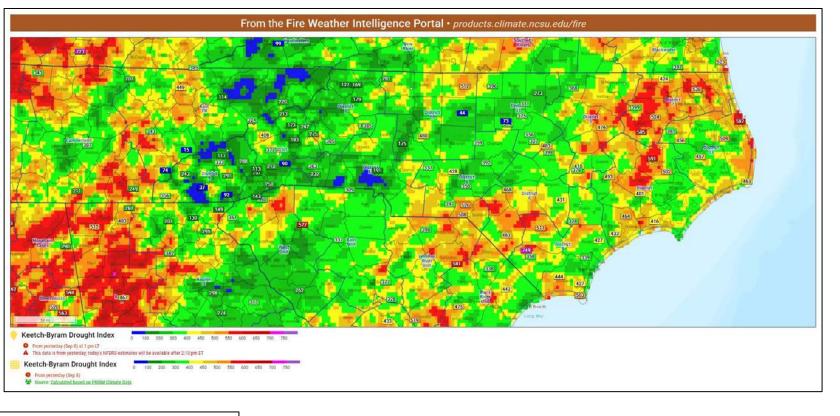
**EDDI Maps -** The EDDI maps at the top right illustrate modeled evaporative demand at the two-week and four-week avg level. They are generally trending drier than normal in Western NC at both time scales. Warmth, lack of precip and dry air accelerates this index.

**US Drought Monitor –** USDM map released last week, note map has added three larger areas of D0 back to NC ~32% of state for 9/2 Assessment Period.

Rapid Onset Drought Risk & Seasonal Drought Outlook - shown at right. See detailed state/regional discussions <a href="https://www.nee.com/here">here</a>. Conditions will have to be monitored moving into Fall, note building deficits across multiple time scales in NC (Slide #4). All of this is dependent upon any future tropical storm tracks and seasonal variability we see moving through late summer and early fall.

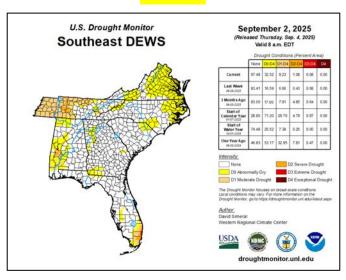


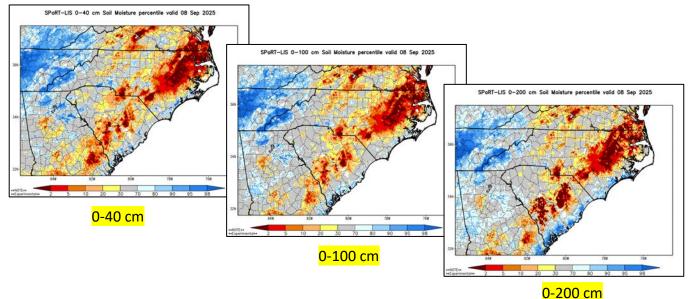


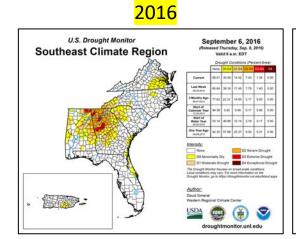


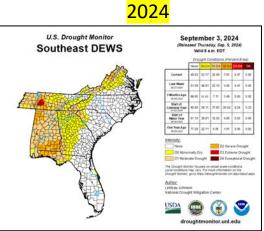
- KBDIs have rebounded due to lack of significant rainfall for portions of the state. Pockets of much lower values are focused in portions of the piedmont and mountains.
- Note modeled 0-200 cm soil moisture percentile, representing the ~0-6 ft. soil profile across the landscape (bottom center).
- USDM Map comparison 2016, 2024, 2025.

### **Current**









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

Released 9/4/25

Location: https://climate.ncsu.edu/fire/outlooks/

# **Short-Range Outlook for North Carolina**

### Week 1:

September 4 to 10, 2025



### Week 2:

September 11 to 17, 2025

Rain chances ramp up later

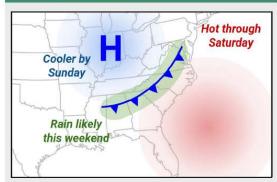
Cooler



### Weeks 3-4:

Sep. 18 to Oct. 1, 2025





### Hot Again, Then Cooler





We'll see a brief return of summer-like heat on Friday and Saturday, with high temperatures in the upper 80s to low 90s for most of the state. A cold front will push through later in the weekend, allowing a cooler and less humid high pressure system to build in.

### Showers This Weekend





The week will start sunny and dry before showers and storms pop up along the cold front, beginning in the Mountains on Saturday evening and spreading eastward on Sunday. Coastal areas could see more rain early next week as the front stalls just offshore.

### **Forecast Confidence**



The tricky part this week is the timing of when the front moves through, which will determine when we see any rain and how long it lasts.

# From Cool to Warm



...then

warming up



Another high pressure system to our north should keep our temperatures slightly below normal to start the week and possibly through next weekend. Once that high moves offshore and our winds shift from the south, we should see a warm-up later this week.

### From Dry to Wet?



Watch the tropics!



Under the control of high pressure, we should be mostly dry early this week, although the coastline could see lingering showers. Better rain chances will return by mid-month with a moist southerly flow off the Atlantic. The tropics are worth watching as well.

### **Forecast Confidence**



An evolving temperature and precipitation pattern, plus a potential tropical system moving westward, add uncertainty this week.

### A Transition Into Fall?

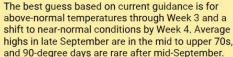
Warmth wanes.

fall arrives?



Maybe dry, but with

moisture nearby



### Dry Days Return?



As in August, the second half of September could see a mostly dry pattern. However, some outlooks have showed moisture moving in across parts of the Southeast US, and the tropical potential will remain elevated as we pass the typical peak of the season.

### **Forecast Confidence**



Another shifting weather pattern, plus question marks about our rainfall and the tropics, makes for low confidence by late-month.

This infographic is based on forecast and outlook guidance from the National Weather Service. For more information, visit www.weather.gov.





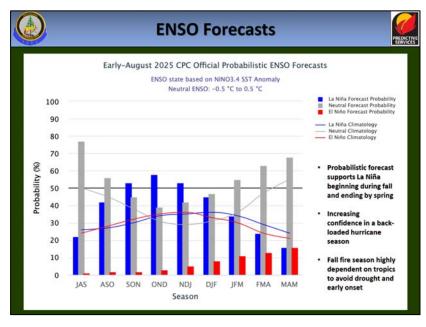


### ENSO Notes from the CPC (8/18/25 Update)

### ENSO Alert System Status: La Niña Watch (ENSO-neutral is present)

ENSO-neutral is most likely through the late Northern Hemisphere summer 2025 (56% chance in August-October). Thereafter, a brief period of La Niña conditions is favored in the fall and early winter 2025-26 before reverting to ENSO-neutral.

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.



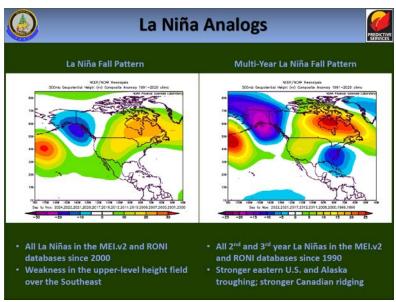
From Southern Area September Seasonal Update Briefing

ONI c					nd La ERS			pisc	des	Bas	ed o	on th	ie
lino Index for histori hreshold eatures co able going	c (ONI) ical pur is met The ( onsiste	[3 mor rposes, for a m ONI is o ent with	nth run period ninimur one me n a cou	ning mils of be n of 5 casure o pled oc	ean of E low and consecu f the El ean-atm	RSST.v: above tive ove Niño-Se nosphe	5 SST a norma er-lapp outher	nomalie I SSTs a ing sea n Oscill	es in th are colo sons. ation, a	e Nino red in I and oth	3.4 reg blue an er indic	ion (5N d red w es can	hen the
	Year	DJF	JFM	FMA	MAM	AMJ	МЭЭ	JJA	JAS	ASO	SON	OND	NDJ
	2013	-0.4	-0.4	-0.3	-0.3	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.3
	2014	-0.4	-0.5	-0.3	0.0	0.2	0.2	0.0	0.1	0.2	0.5	0.6	0.7
	2015	0.5	0.5	0.5	0.7	0.9	1.2	1.5	1.9	2.2	2.4	2.6	2.6
	2016	2.5	2.1	1.6	0.9	0.4	-0.1	-0.4	-0.5	-0.6	-0.7	-0.7	-0.6
	material and the												
	2017	-0.3	-0.2	0.1	0.2	0.3	0.3	0.1	-0.1	-0.4	-0.7	-0.8	-1.0
	installmented()	-0.3 -0.9	-0.2	0.1	0.2 -0.5	0.3 -0.2	0.3	0.1	-0.1 0.2	-0.4 0.5	-0.7 0.8	-0.8 0.9	-1.0 0.8
	2017				10000	0.0							
	2017 2018	-0.9	0.9	-0.7	-0.5	-0.2	0.0	0.1	0.2	0.5	0.8	0.9	0.8
	2017 2018 2019	0.7	0.7	0.7	-0.5 0.7	-0.2 0.5	0.0	0.1	0.2	0.5	0.8	0.9	0.8
	2017 2018 2019 2020	-0.9 0.7 0.5	-0.9 0.7 0.5	0.7 0.4	-0.5 0.7 0.2	-0.2 0.5 -0.1	0.0	0.1 0.3 -0.4	0.2 0.1 -0.6	0.5 0.2 -0.9	0.8 0.3 -1.2	0.9 0.5 -1.3	0.8 0.5 -1.2
	2017 2018 2019 2020 2021	-0.9 0.7 0.5 -1.0	-0.9 0.7 0.5 -0.9	-0.7 0.7 0.4 -0.8	-0.5 0.7 0.2 -0.7	-0.2 0.5 -0.1 -0.5	0.0 0.5 -0.3 -0.4	0.1 0.3 -0.4 -0.4	0.2 0.1 -0.6 -0.5	0.5 0.2 -0.9 -0.7	0.8 0.3 -1.2 -0.8	0.9 0.5 -1.3 -1.0	0.8 0.5 -1.2 -1.0
	2017 2018 2019 2020 2021 2022	-0.9 0.7 0.5 -1.0	-0.9 0.7 0.5 -0.9	-0.7 0.7 0.4 -0.8	-0.5 0.7 0.2 -0.7 -1.1	-0.2 0.5 -0.1 -0.5 -1.0	0.0 0.5 -0.3 -0.4	0.1 0.3 -0.4 -0.4	0.2 0.1 -0.6 -0.5 -0.9	0.5 0.2 -0.9 -0.7 -1.0	0.8 0.3 -1.2 -0.8 -1.0	0.9 0.5 -1.3 -1.0 -0.9	0.8 0.5 -1.2 -1.0 -0.8

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

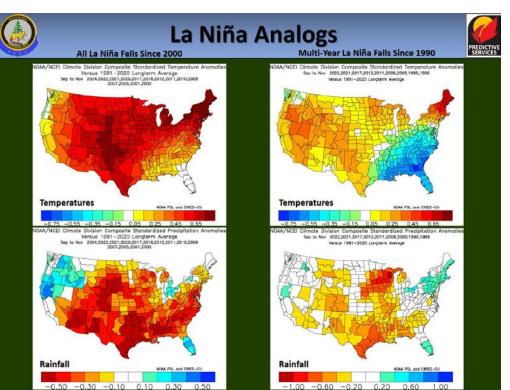
The IRI predictions indicate ENSO-neutral is most likely to persist through the Northern Hemisphere winter 2025-26 [Fig. 6]. However, similar to last month, the North American Multi-Model Ensemble favors La Niña conditions for a short duration during the Northern Hemisphere fall and early winter. Based on this guidance and recent changes in the tropical Pacific, the forecast team narrowly favors La Niña thresholds being reached in three overlapping, 3-month seasons (Niño-3.4 index ≤ - 0.5°C during September-November, October-December, and November-January). In summary, ENSO-neutral is most likely through the late Northern Hemisphere summer 2025 (56% chance in August-October). Thereafter, a brief period of La Niña conditions is favored in the fall and early winter 2025-26 before reverting to ENSO-neutral [Fig. 7].

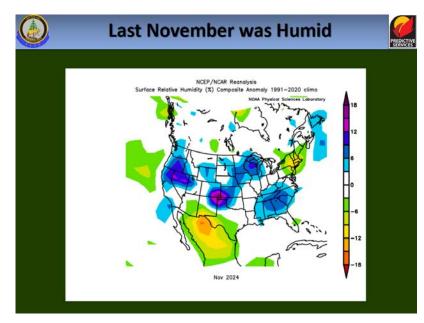
Slide Source: https://www.cpc.ncep.noaa.gov/products/analysis monitoring/lanina/enso evolution-status-fcsts-web.ppt

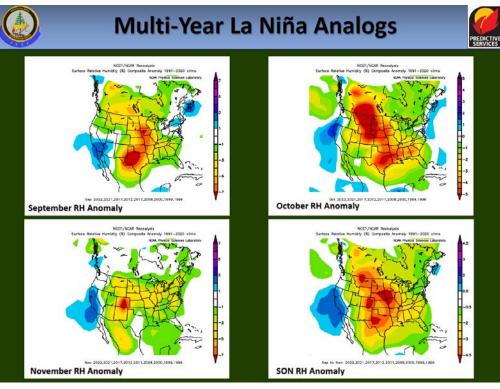


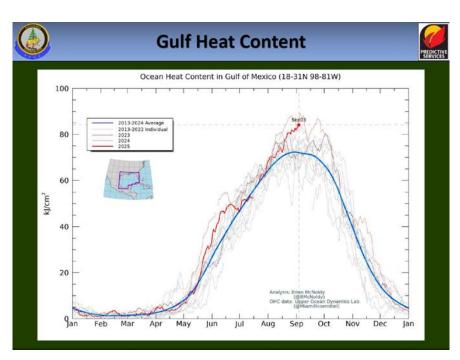
- From Southern Area September Seasonal Update Briefing -

Context related to La Nina's potential impact to the Fire Environment this Fall

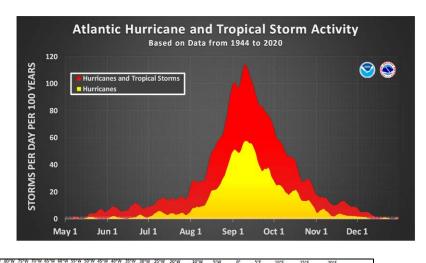


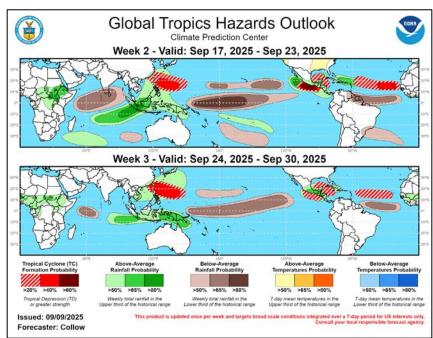


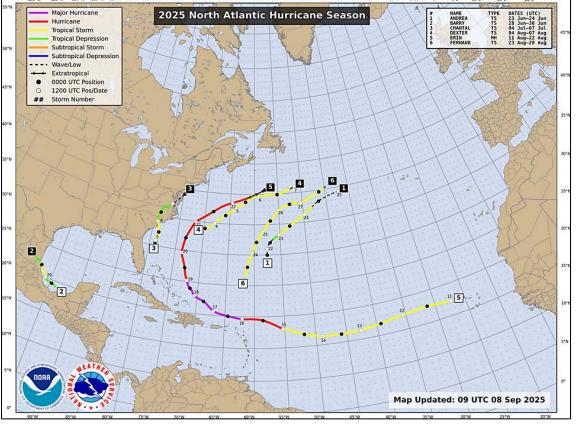


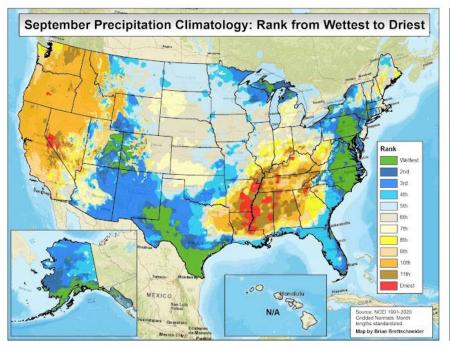


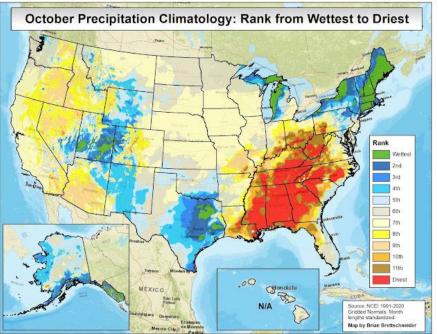
# Tropical Related

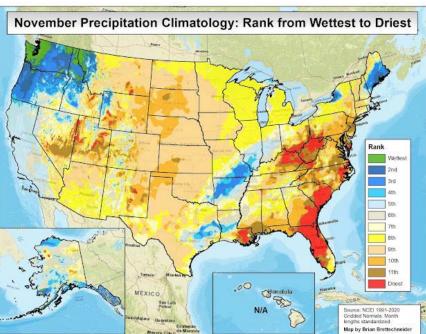


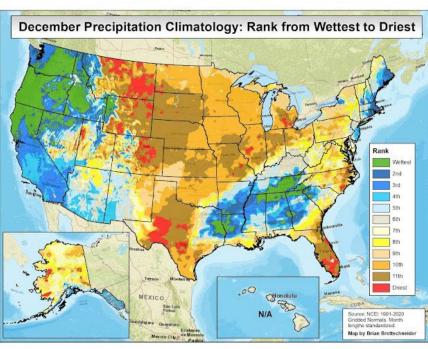










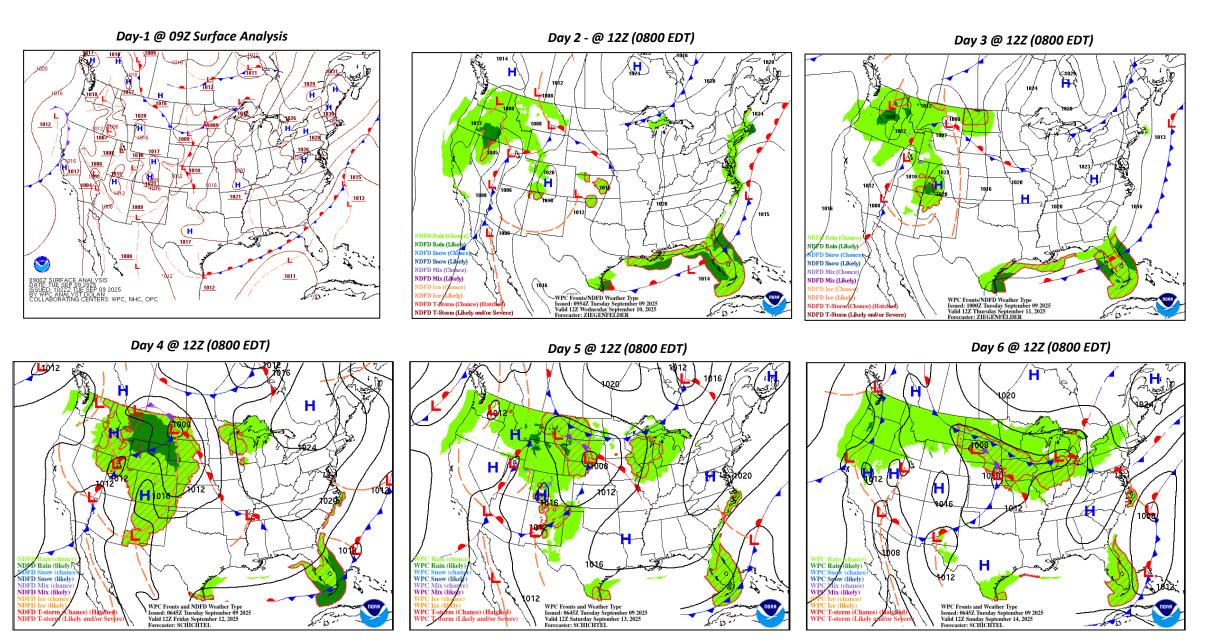


# Rainfall Rankings by Month (1991-2020 Climatology)

Note that September is generally the wettest month on average for much of NC, followed by October being the driest.

https://us-climate.blogspot.com/2021/06/wettest-months-of-year-1991-2020.html

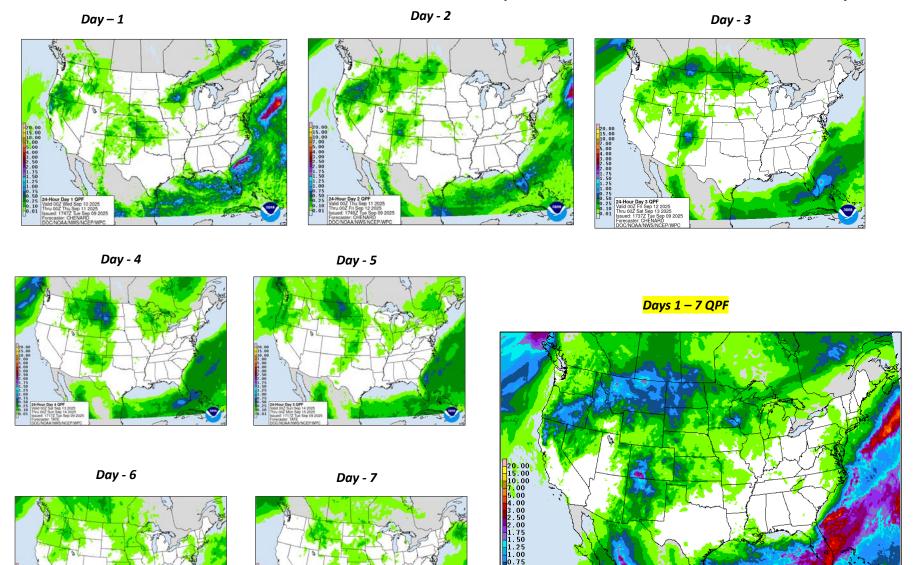
### WPC Forecasted Surface Fronts & Sea-Level Pressures



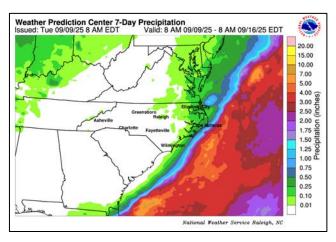
Location: <a href="https://www.wpc.ncep.noaa.gov/#">https://www.wpc.ncep.noaa.gov/#</a>

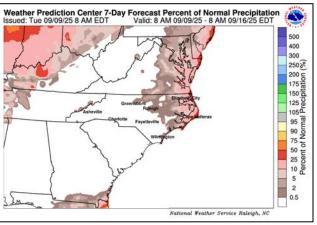
# Quantitative Precipitation Forecast, 7-Day

168-Hour Day 1-7 QPF Valid 00Z Wed Sep 10 2025 Thru 00Z Wed Sep 17 2025 Issued: 2059Z Tue Sep 09 2025 Forecaster: WPC



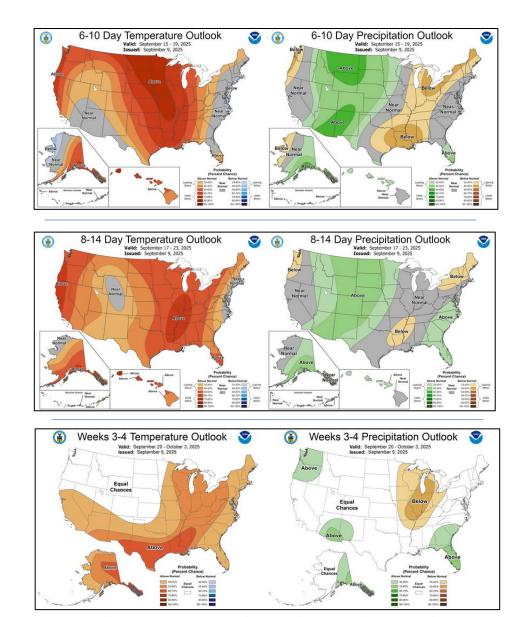
### Zoom - Days 1 – 7 QPF

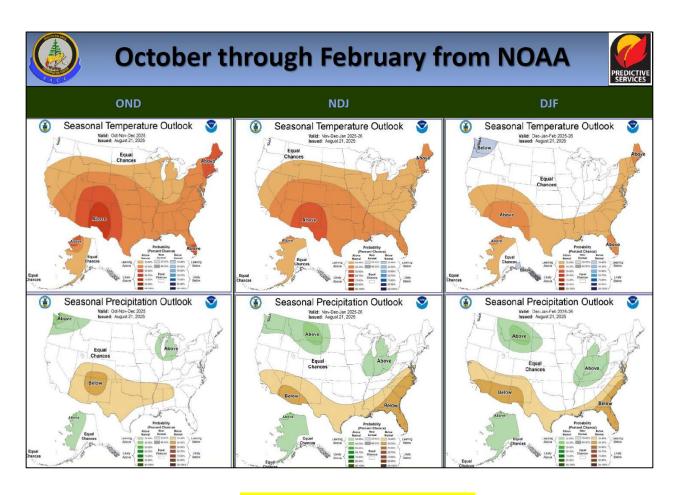




# Temp & Precip Outlook

6-10 Day, 8-14 Day, Weeks 3-4, Seasonal (O/N/D, N/D/J, D/J/F)





Last Updated by CPC on August 21st

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

https://www.cpc.ncep.noaa.gov/products/predictions/long\_range/fxus05.html

# NFDRS Observations from yesterday, September 8<sup>th</sup> (Averaged for each FDRA by SIG Group & "All Days Filter")

							Averag	es by FDI	RA									
FDRA	STATION_COUNT	NFDR_DATE	BI	ERC	IC	SC	KBDI	1HR	10HR	100HR	1000HR	HRB	WOODY	TEMP	RH	WIND	PRECIP	DUR
Southern Highlands	3	2025-09-08	23.13 30.6%	15.00 44.5%	2.90 51.9%	5.73 25.9%	178.67	12.69 42.1%	17.85 50.6%	22.24 79.4%	22.71 87.0%	238.90	192.67	70.0°F	58.3%	SSW 2.0 mph	0.00 in.	0.0
Central Mountains	3	2025-09-08	18.77 27.1%	13.13 35.3%	2.20 38.8%	4.23 21.8%	271.67	13.41 46.9%	20.79 70.5%	20.80 73.1%	22.73 92.5%	250.00	200.00	71.0°F	45.7%	WSW 1.7 mph	0.00 in.	0.0
Northern Highlands	2	2025-09-08	22.95 40.4%	12.55 43.5%	2.55 58.1%	6.75 45.0%	176.00	13.37 37.9%	19.81 63.1%	20.50 73.3%	22.95 91.2%	250.00	200.00	65.5°F	51.0%	ENE 2.5 mph	0.00 in.	0.0
Blue Ridge Escarpment	3	2025-09-08	26.10 32.7%	20.83 52.7%	4.63 54.4%	5.33 19.9%	272.33	10.40 24.9%	15.31 31.1%	19.69 58.2%	20.76 66.0%	242.37	194.67	72.7°F	43.0%	ENE 2.7 mph	0.00 in.	0.0
Western Piedmont	3	2025-09-08	24.73 26.9%	17.23 30.1%	4.63 49.6%	5.73 28.9%	248.00	10.55 43.9%	19.39 70.4%	21.14 80.8%	22.28 87.4%	245.97	197.33	75.3°F	37.7%	NE 6.0 mph	0.00 in.	0.0
Sandhills	3	2025-09-08	35.30 46.1%	31.20 33.4%	9.33 54.9%	7.63 80.2%	448.00	11.05 46.1%	21.32 77.7%	20.16 68.3%	20.07 64.0%	214.67	177.00	78.3°F	39.3%	NE 6.7 mph	0.00 in.	0.3
Eastern Piedmont	4	2025-09-08	34.90 18.8%	18.65 23.1%	5.88 42.0%	11.23 15.6%	389.75	11.13 39.1%	19.98 72.9%	20.76 78.5%	19.85 62.9%	218.33	179.50	75.0°F	40.8%	NE 8.0 mph	0.00 in.	0.0
Southern Coastal	7	2025-09-08	29.66 23.5%	16.69 24.0%	4.59 44.6%	9.53 26.3%	451.71	12.07 47.5%	21.02 76.0%	19.26 46.5%	20.24 49.1%	238.41	197.71	80.0°F	48.9%	NE 7.6 mph	0.26 in.	2.1
Northern Coastal	4	2025-09-08	28.18 20.0%	18.20 25.5%	4.20 35.0%	7.50 17.9%	493.75	11.68 48.6%	20.82 77.4%	18.83 52.8%	19.47 38.5%	225.98	194.50	80.0°F	49.8%	NE 5.5 mph	0.15 in.	1.5
				•		•												
												ı						

Note decline in 100-hr & 1000-hr dead fuel classes to the East, while recent unsettled weather/precip has led to increases in 1000-hr fuel moisture to the West.

# WIMS Retirement &

# Fire Environment Mapping System (FEMS)



# Pending WIMS Retirement



WIMS is being retired and replaced by FEMS, part of the multi-year NFDRS V4 implementation plan.

- Key Date #1: 9/15/25 WIMS portal access ends for users, users fully transition to using FEMS for NFDRS outputs
- Key Date #2: 9/30/25 WIMS will go end of life with all access, including WXML data feed, turned off
- Key Date #3: 10/1/25 FEMS becomes the operational and authoritative NFDRSv4 database
- Please refer to the <u>Transition Materials</u> link for briefing materials, updating as needed by the national program.
- Please read the <u>"Summary of Changes from WIMS to Fire Environment Mapping System (FEMS)"</u> document.

# Fundamental Differences with FEMS:

### **Weather Forecasts & Data Management**

### Forecast Source & Updates

- Hourly forecasts are provided directly from the Office of Atmospheric Research (OAR), not from local weather service offices.
- Forecast periods align with NWS Midnight-Midnight windows (not 1300–1300).
- Forecasts are updated daily at 0300z.

### Snow Flags

- Snow flag observations are automated and updated daily at 1600z.
- Snow flags are not part of the NOAA forecast.

### Weather Observations & Station Metadata

- Data and metadata are linked from **WXx-weather**; field users cannot adjust them directly in FEMS.
- Station metadata can be updated in WXx by field staff and will sync to FEMS daily.
- Missing or incorrect observation data cannot be corrected at the field level.
- Large data gaps (e.g., due to transmission issues) must be downloaded from the station and submitted to the national program via coordinators for inclusion in FEMS.
- The national program is developing a standard process for gap-filling and quality control (QC).

### System-Level Management

- FEMS uses catalog-based fire danger parameters; multiple stations can be assigned to a single catalog.
- Regional-level catalogs (e.g., Southeast, Midwest, Northwest) will be developed to tailor GSI and related settings.
- The old method of individual station adjustments created wide inconsistencies across agencies, regions, and from station to station.
- A QA/QC'd climatological dataset provides consistent historical weather records (2005–2022, or from station establishment if later through 2022). Currently limited to permanent Satellite RAWS.

### Access & Use Differences: FEMS vs WIMS

- Most field staff will **not need a FEMS login** via FamAuth.
- Field staff will not edit catalogs, weather observations, or individual station parameters (not same format as WIMS).
- A public-facing FEMS site allows staff to manipulate maps, view stations, and download most data.
- The FEMS portal is intuitive and provides a variety of graphs, tables, and visualization tools.

# Current Limitations (at rollout)

- •FEMS is not yet fully built out (see referenced briefing documents).
- •Mesonet stations are not currently included in FEMS.
  - •ASOS and AWOS stations have recently been added as additional data sources.
  - •State mesonet networks (such as the NC State Climate Office "ECONet") are planned for inclusion in late Fall 2025.
- •Portable RAWS stations will be incorporated later in the "Weather" display.
  - •These stations will not generate fire danger calculations (unlike WIMS).
- •The <u>Fire Weather Intelligence Portal</u> currently uses automated queries from WIMS to pull NFDRS data. Additional weather variables are queried separately depending on the network. These queries and scripts will be adjusted to align with FEMS specifications and available stations.
- •Fire Danger will no longer be calculated once per day at 1300 Local Time. As intended with NFDRS V4, calculations now occur hourly from midnight to midnight on a UTC framework.
  - •The focus is on capturing daily maximums and minimums, rather than relying on a single 1300 snapshot—which rarely represented the "worst-case" hour.
  - •Because of this change, WIMS 1300 NFDRS outputs and FEMS numerical outputs should <u>not</u> be treated as interchangeable, especially when using fuel models with live fuels.
- •All users are in a learning phase as the system continues to be developed and refined.
- •Transitioning during the start of the Eastern U.S. fall fire season is not ideal, but necessary due to factors outside of program control.

\*\*Expect some hiccups as the new system is fully integrated into daily operations.\*\*

# Impacts Specific to NC: FDOP and Fire Danger Outputs

### **Weather Stations**

- •State Mesonet Stations (e.g., NC ECONet) have not yet been added.
  - Several North Carolina FDRAs rely on stations from alternate gateway sources (SCO ECONet).
  - For example, the East Piedmont FDRA currently utilizes four of these ECONet stations.
- •FEMS has recently incorporated ASOS and AWOS stations as a stopgap measure; however, these stations (e.g., RDU Airport) have no prior period of record.

### Live Fuel Moisture (LFM) Model

- •Currently set to a national preliminary standard in FEMS.
- •Four main drivers are used: Day Length, Minimum Temperature, Vapor Pressure Deficit, and Running Total Precipitation.
- •The GSI-derived LFM Model standard settings create fundamental limitations that directly affect FM-V, FM-W, and FM-X.
- •National standard settings do not allow regional adjustments for local growing conditions. This will evolve over time as bugs are addressed, stations are added, and further analysis is completed.

### **Data and Modeling Updates**

- •FF+ Databases are being recalculated to align with new FEMS standards (see earlier documentation).
- •For this update of the NC FDOP, only dead fuel models will be used due to the known LFM limitations in the initial FEMS rollout.
- •A reevaluation will be necessary over the next year as additional alternate gateway station types are integrated.

### **FDOP Revision Status**

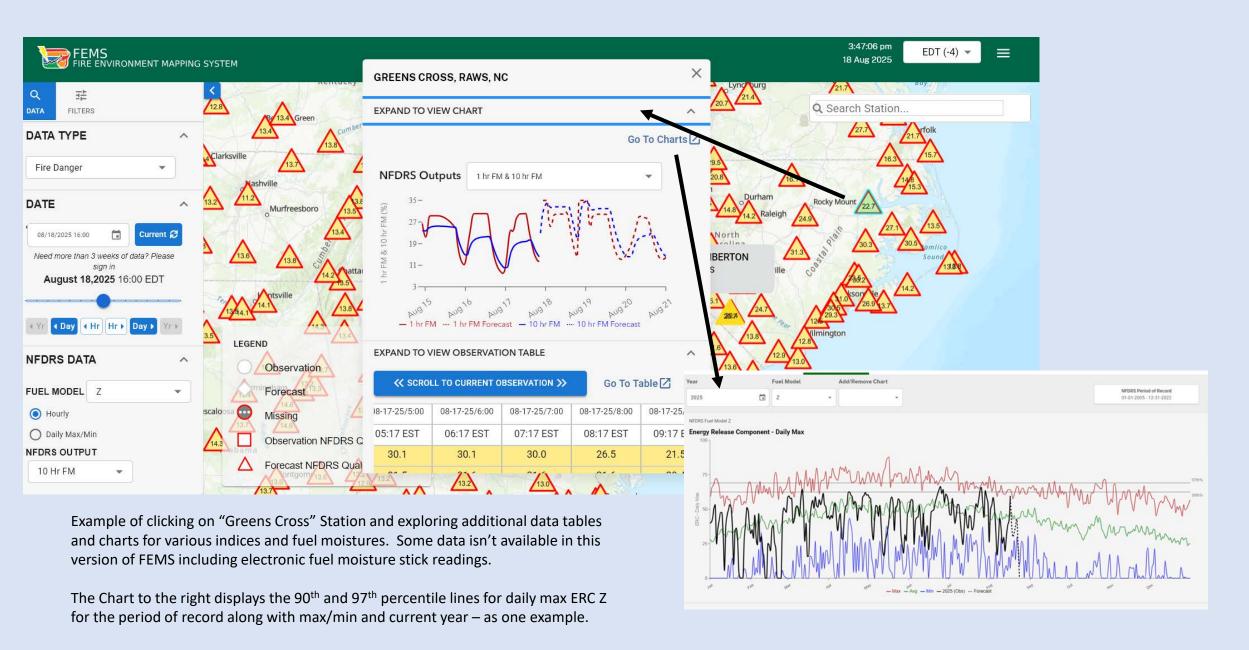
- •NC FDOP updates were started but then paused to allow time for FEMS development through early summer 2025.
- •This pause has been recommended nationwide to ensure consistency as development progresses.

### **Current FDOP Work and Next Steps**

- •Weather and fire occurrence data (2010–2024) are being processed to establish initial working breakpoints for FEMS/V4 outputs.
- •These breakpoints will drive fire danger products (e.g., adjective ratings and hazard levels) moving into Fall 2025 and Spring 2026.
- •Updated values will be incorporated into FWIP products currently in use.
- •Pocket Cards will be updated to reflect changes in the new period of record, fuel models and associated breakpoints.
- •FWIP product updates may be delayed depending on station availability and data connections.



### Weather, Fire Danger and Live Fuels Mapping View Options



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

- These are extracts from FF+ using daily observation data downloaded from WIMS
- Graphs run in calendar year format from Jan-Dec to stay consistent with FDOP and yearly Percentiles. Averages from SIG stations across each FDRA.
- Using current approved FDOP related settings (not FEMS, not daily extremes)

### 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.

\*Growing Season Index (GSI) has greened the live herbaceous & woody vegetation in the Fire Danger Rating Areas (FDRAs) within the NFDRS model. This greening directly impacts Fuel Model X outputs. Remember that it is only a model, and actual live fuel moisture depends on a variety of factors. There is variability across the broader landscape, especially with the nature of summer precip patterns. Values are averaged across the FDRA SIG Station Group.

### 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

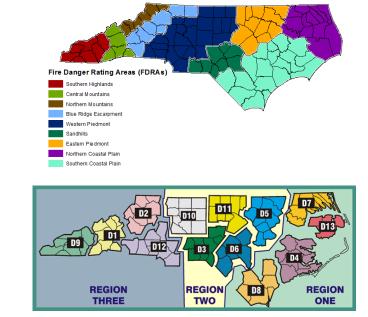
Dead fuel moisture forecast values are grouped into three categories based on historical percentiles, assessed using the FF+ All Days filter through 2021:

- . Low to Moderate (26th to 100th percentile); shown in blue-green
- High (11th to 25th percentile); shown in vellow
- 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.

### Important notes for next slide group:



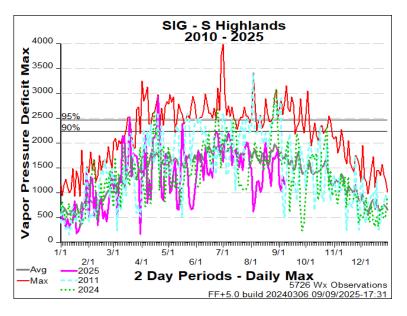
To reduce duplication & increase situational awareness, slides are organized by FDRA in this order:

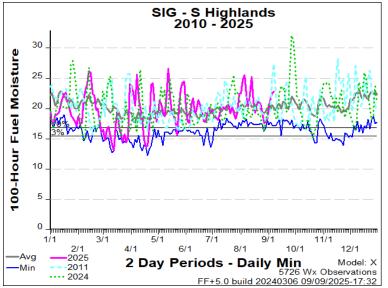
$$*(R3 = Region 3, R2 = Region 2, R1 = Region 1)$$

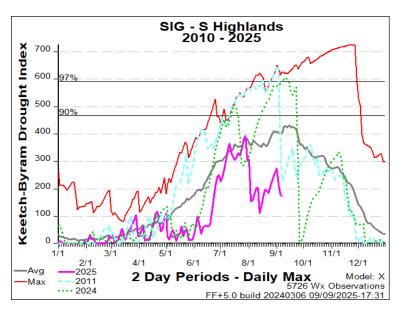
- Southern Highlands (R3)
- Central Mountains (R3)
- Northern Highlands (R3)
- Blue Ridge Escarpment (R2 & R3)
- Western Piedmont (R2 & R3)
- Eastern Piedmont (R2)
- Sandhills (R2)
- North Coast (R1)
- South Coast (R1 & R2)

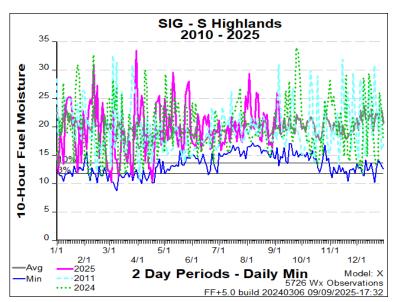
# FDRA – Southern Highlands

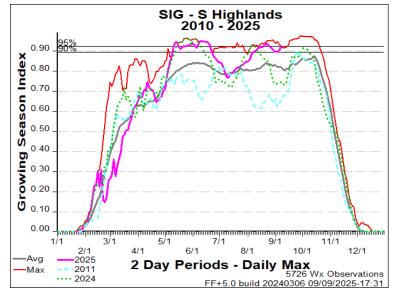


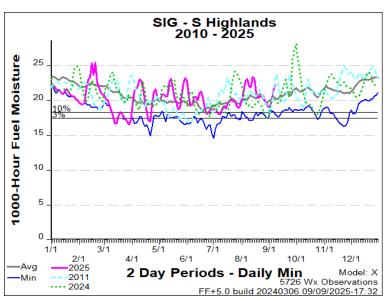




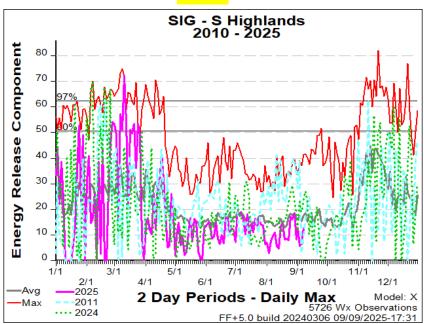








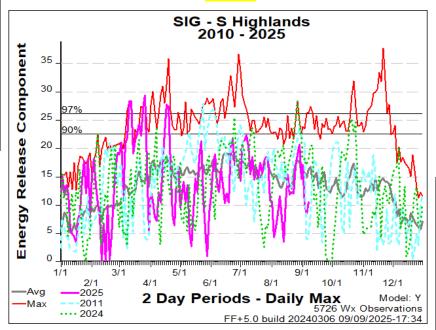
### **ERC-X**



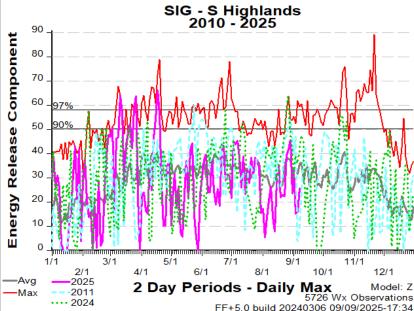
# FDRA – Southern Highlands



### **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, CY Year 2011, 2024 are displayed along with Year-to-Date 2025

# 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	TUE 09-Sep	WED 10-Sep	THU 11-Sep	FRI 12-Sep	SAT 13-Sep	SUN 14-Sep	MON 15-Sep
Avg. Max. Temp. (°F)	73	76	77	77	77	79	80
Avg. Min. Humidity (%)	50	47	47	46	48	47	48
Avg. 20' Wind Speed (mph)	2	2	2	2	2	2	3
Avg. Wind Direction*	SE	SW	S	ESE	S	SW	SSE
Avg. Probability of Precip. (%)	0	0	2	3	2	4	7
Days Since a Wetting Rain**	4.7	5.7	6.7	7.7			
Forecast ERC (Fuel Model X)	13.6	13.5	14.1	14.1	13.5	13.5	14.2
Forecast BI (Fuel Model X)	21.0	20.6	20.5	20.9	20.5	21.4	22.1
Forecast IC (Fuel Model X)	2.5	2.5	2.7	2.9	2.7	2.8	3.1
Forecast 100-Hr. FMC	19.6	18.8	18.3	17.9	17.8	17.8	17.7
Forecast 1000-Hr. FMC	23.0	23.0	22.9	22.8	22.6	22.3	22.1
KBDI	178.7						

### Data Source:

- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. 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 <u>NFDRS Forecast</u> 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:

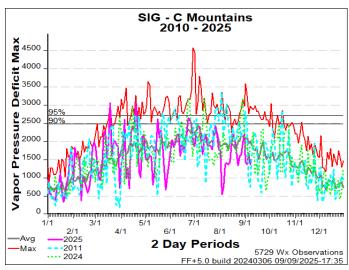
- Tusquitee (315602)
- Locust Gap (315802)
- Highlands (315803)

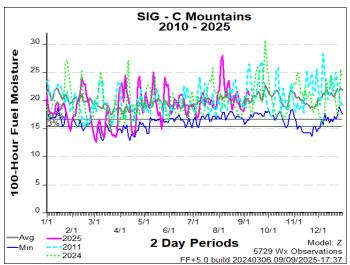
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 55°F	Greater than 55°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 5 mph	Between 5 mph and 7 mph	Greater than 7 mph
Avg. Wind Direction*	Criticality of wind direc	ction is highly dependent on burn ope	erations and/or structures threatened.
Days Since a Wetting Rain**	A wetting rain is define	ed as 0.10" or greater. This is an avera	ge 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

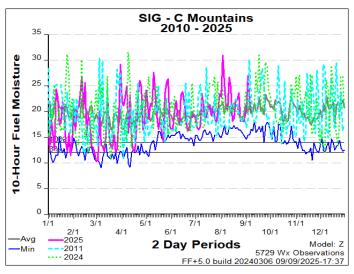
Other factors to consider when determining fire danger: sky conditions, precipitation amount, number of days since rain, and season

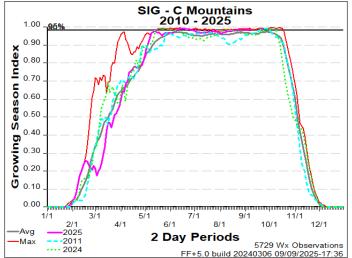
# FDRA – Central Mountains

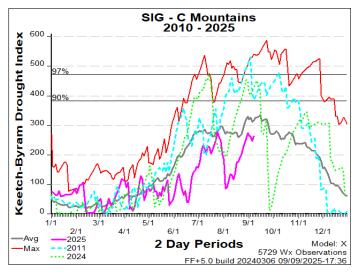


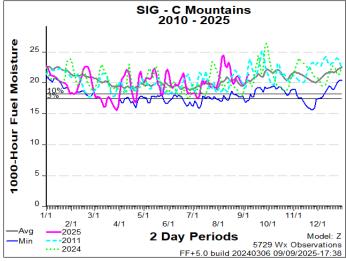




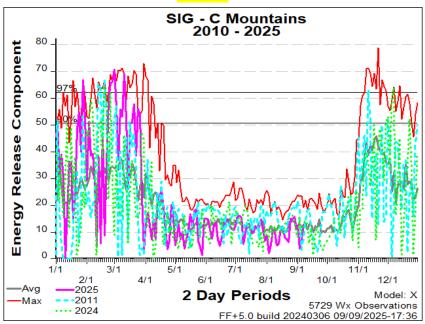








### **ERC-X**

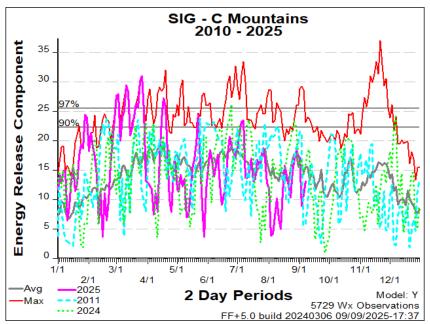


# FDRA – Central Mountains

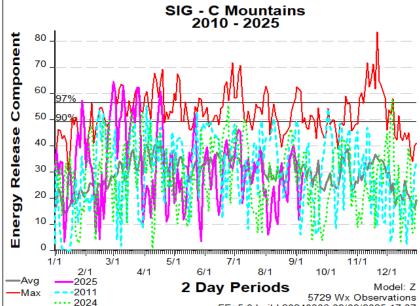


FF+5.0 build 20240306 09/09/2025-17:37

### **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

<del>------</del>

Average, Max, CY Year 2011, 2024 are displayed along with Year-to-Date 2025

# 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	TUE 09-Sep	WED 10-Sep	THU 11-Sep	FRI 12-Sep	SAT 13-Sep	SUN 14-Sep	MON 15-Sep
Avg. Max. Temp. (°F)	75	77	80	80	80	82	83
Avg. Min. Humidity (%)	46	44	42	43	46	43	47
Avg. 20' Wind Speed (mph)	3	2	3	2	2	3	3
Avg. Wind Direction*	ESE	WSW	WSW	S	S	SW	WSW
Avg. Probability of Precip. (%)	0	0	3	5	3	5	9
Days Since a Wetting Rain**	4.3	5.3	6.3	7.3			
Forecast ERC (Fuel Model X)	14.2	14.6	14.0	14.1	14.1	14.1	14.8
Forecast BI (Fuel Model X)	19.7	22.0	21.0	19.7	20.2	21.1	21.6
Forecast IC (Fuel Model X)	2.1	2.7	2.5	2.5	2.5	2.7	3.0
Forecast 100-Hr. FMC	18.6	18.1	17.8	17.7	17.7	17.8	17.7
Forecast 1000-Hr. FMC	22.7	22.6	22.5	22.2	22.0	21.8	21.6
KBDI	271.7						



### Data Source:

- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. 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 <u>NFDRS Forecast</u> product does not include precipitation amounts, which are used to adjust KBDI from day to day

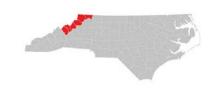
Values in the table above are averages from 3 stations in this FDRA:

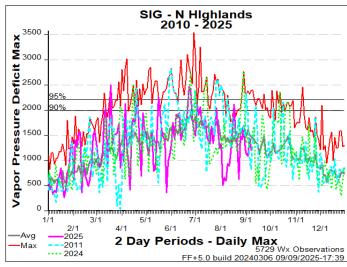
- 7 Mile Ridge (313302)
- Davidson River (316001)
- Mtn Horticultural Crops Res Stn (316141)

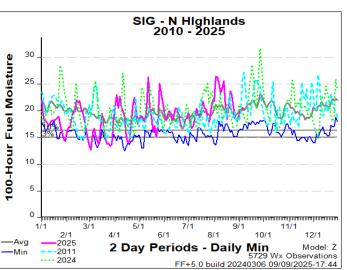
Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Greater than 35%	Between 30% and 35%	Less than 30%
Less than 5 mph	Between 5 mph and 10 mph	Greater than 10 mph
Criticality of wind dire	ction is highly dependent on burn ope	rations and/or structures threatened
A wetting rain is define	ed as 0.10" or greater. This is an avera	ge of the FDRA stations noted above
Less than 33	Between 33 and 50	Greater than 50
Less than 78	Between 78 and 106	Greater than 106
Less than 6	Between 6 and 11	Greater than 11
Greater than 19%	Between 17% and 19%	Less than 17%
Greater than 20%	Between 19% and 20%	Less than 19%
Less than 319	Between 319 and 417	Greater than 417
	Less than 50°F Greater than 35% Less than 5 mph Criticality of wind dire A wetting rain is define Less than 33 Less than 78 Less than 6 Greater than 19% Greater than 20%	Less than 50°F Between 50°F and 60°F Greater than 35% Between 30% and 35% Less than 5 mph Between 5 mph and 10 mph Criticality of wind direction is highly dependent on burn ope A wetting rain is defined as 0.10" or greater. This is an average the strength of the strengt

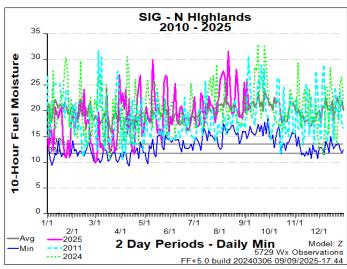
Other factors to consider when determining fire danger: sky conditions, precipitation amount, number of days since rain, and season

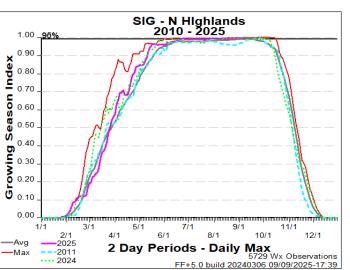
# FDRA – Northern Highlands

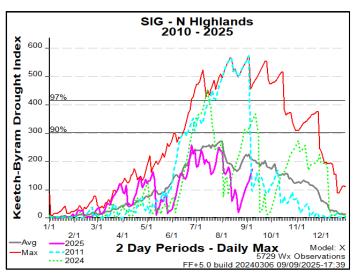


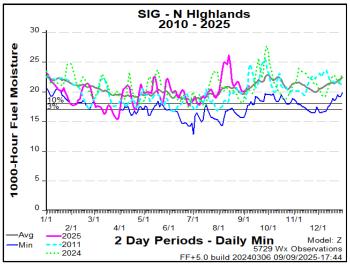


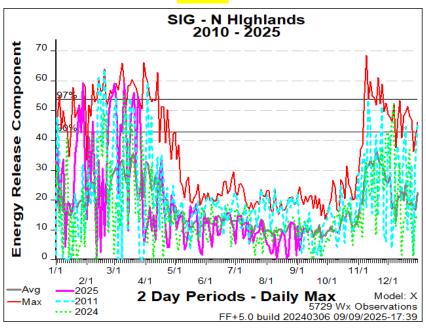




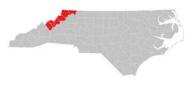






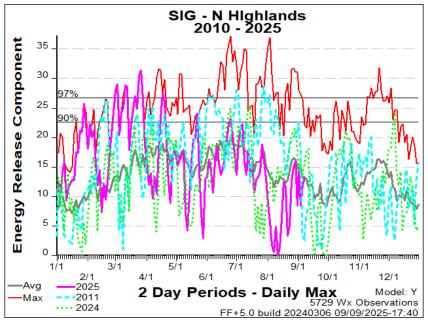


# FDRA – Northern Highlands

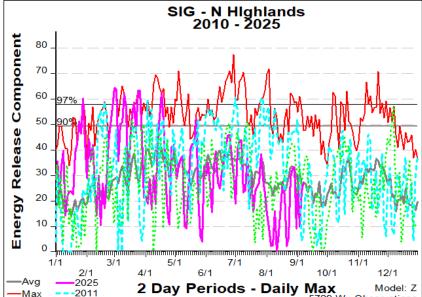


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#### **ERC-Y**



## **ERC-Z**



.... 2024

#### **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

# FDRA – Northern Highlands

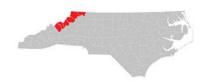
#### **Weekly Outlook**

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	TUE 09-Sep	WED 10-Sep	THU 11-Sep	FRI 12-Sep	SAT 13-Sep	SUN 14-Sep	MON 15-Sep
Avg. Max. Temp. (°F)	70	74	75	75	74	77	79
Avg. Min. Humidity (%)	46	43	47	48	55	52	54
Avg. 20' Wind Speed (mph)	3	2	3	2	2	3	3
Avg. Wind Direction*	E	WSW	S	SSW	SE	SW	NW
Avg. Probability of Precip. (%)	0	0	3	6	3	7	12
Days Since a Wetting Rain**	3.0	4.0	5.0	6.0			
Forecast ERC (Fuel Model X)	13.3	14.9	15.2	15.6	14.1	13.7	14.4
Forecast BI (Fuel Model X)	21.6	21.8	22.0	22.3	21.2	21.9	23.1
Forecast IC (Fuel Model X)	2.0	2.5	2.8	2.9	2.5	2.5	2.9
Forecast 100-Hr. FMC	19.3	18.5	18.0	17.5	17.2	17.3	17.4
Forecast 1000-Hr. FMC	23.0	22.9	22.7	22.4	22.2	22.0	21.8
KBDI	176.0						



#### Data Source

- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. 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 <u>NFDRS Forecast</u> 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:

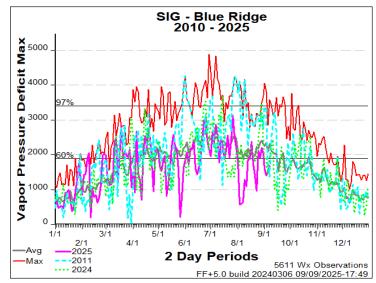
- Laurel Springs (310101)
- Upper Mountain Research Stn (310141)
- Busick (313402)

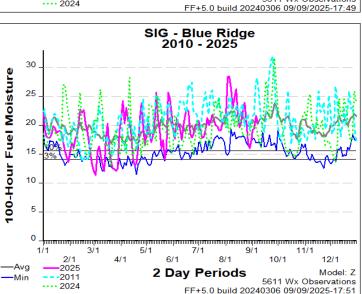
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!					
Avg. Max. Temp.	Less than 50°F	Between 50°F and 58°F	Greater than 58°F					
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%					
Avg. 20' Wind Speed	Less than 2 mph	Between 2 mph and 5 mph	Greater than 5 mph					
Avg. Wind Direction*	Criticality of wind dire	Criticality of wind direction is highly dependent on burn operations and/or structures threatened.						
Days Since a Wetting Rain**	A wetting rain is defin	A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted a						
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 wh	en determining fire dans	ger: sky conditions, precipitation ar	mount, number of days since rain,					

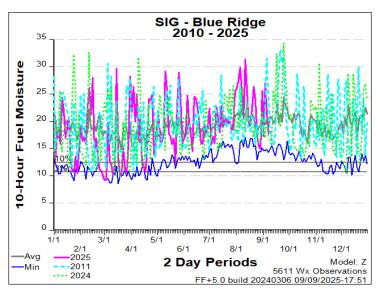
Other factors to consider when determining fire danger: sky conditions, precipitation amount, number of days since rain and season

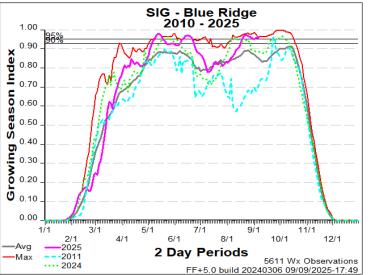
# FDRA – Blue Ridge Escarpment

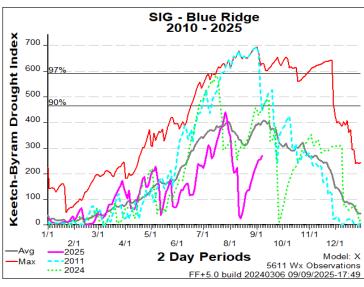


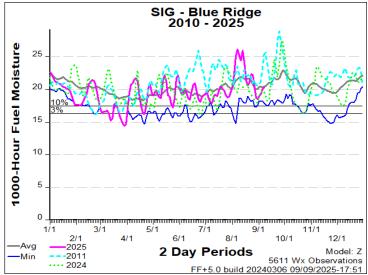


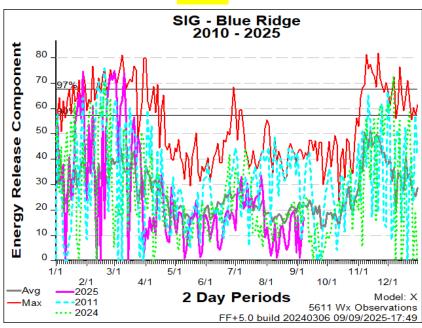










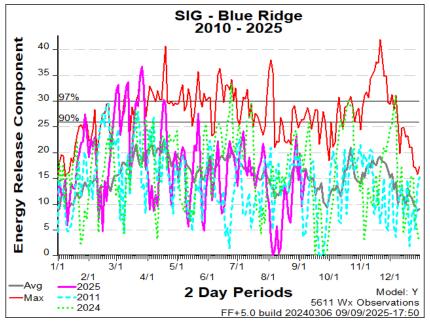


# FDRA – Blue Ridge Escarpment

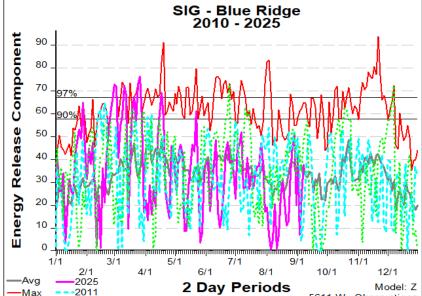


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## **ERC-Y**



## **ERC-Z**



.... 2024

#### **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

# 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	TUE 09-Sep	WED 10-Sep	THU 11-Sep	FRI 12-Sep	SAT 13-Sep	SUN 14-Sep	MON 15-Sep
Avg. Max. Temp. (°F)	72	77	80	79	77	81	83
Avg. Min. Humidity (%)	43	42	43	45	49	46	50
Avg. 20' Wind Speed (mph)	3	2	2	3	3	2	3
Avg. Wind Direction*	ENE	SSE	S	SSW	E	W	W
Avg. Probability of Precip. (%)	0	0	3	5	3	6	8
Days Since a Wetting Rain**	5.7	6.7	7.7	8.7			
Forecast ERC (Fuel Model X)	17.5	17.5	17.2	17.5	16.0	15.4	15.9
Forecast BI (Fuel Model X)	25.2	21.3	22.2	22.9	22.0	21.5	22.3
Forecast IC (Fuel Model X)	3.3	2.8	3.2	3.3	2.9	2.8	3.0
Forecast 100-Hr. FMC	17.1	16.8	16.7	16.9	17.2	17.6	17.9
Forecast 1000-Hr. FMC	19.9	19.5	19.3	19.1	19.0	18.9	18.9
KBDI	272.3						

#### Data Source:

- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. 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

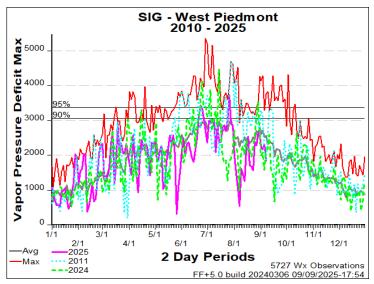
Values in the table above are averages from 3 stations in this FDRA:

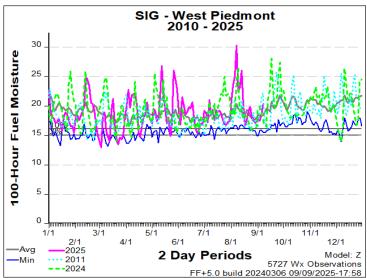
- Rendezvous Mtn. (312001)
- North Cove Pinnacle (fr1) (314301)
- Rutherford County (316302)

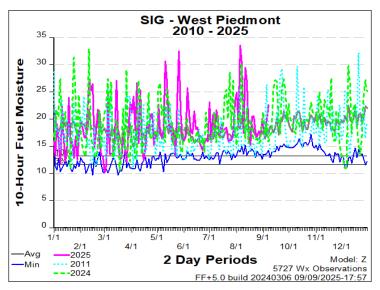
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 40°F	Between 40°F and 50°F	Greater than 50°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 2 mph	Between 2 mph and 4 mph	Greater than 4 mph
Avg. Wind Direction*	Criticality of wind direc	tion is highly dependent on burn ope	rations and/or structures threatened
Days Since a Wetting Rain**	A wetting rain is define	ed as 0.10" or greater. This is an avera	ge 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

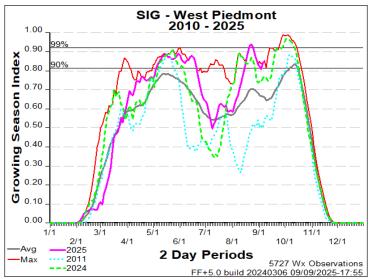
# FDRA – Western Piedmont

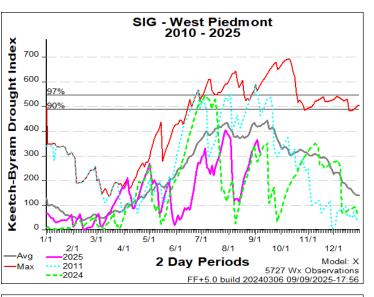


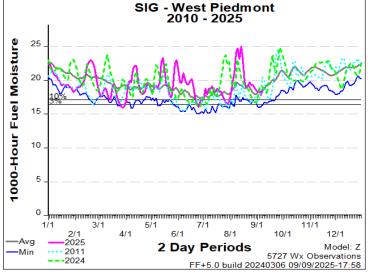


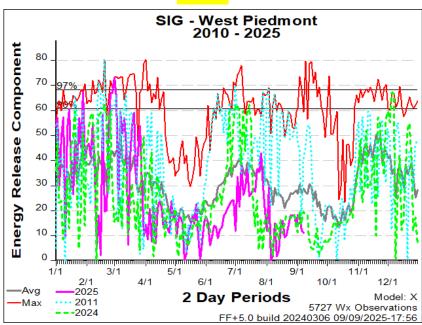








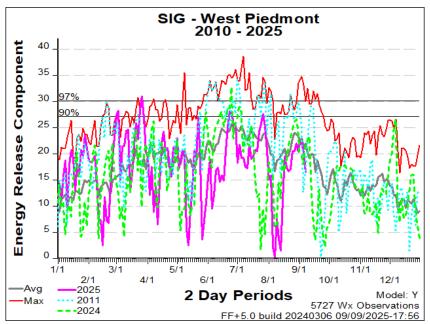




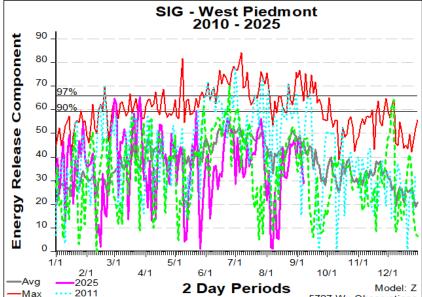
# FDRA – Western Piedmont



#### **ERC-Y**



#### **ERC-Z**



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---2024

#### **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

# 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 09-Sep	WED 10-Sep	THU 11-Sep	FRI 12-Sep	SAT 13-Sep	SUN 14-Sep	MON 15-Sep
Avg. Max. Temp. (°F)	76	78	81	83	81	83	85
Avg. Min. Humidity (%)	41	49	48	45	49	47	48
Avg. 20' Wind Speed (mph)	6	4	3	4	4	3	3
Avg. Wind Direction*	NE	NNE	Ε	NNE	NE	SSE	SSW
Avg. Probability of Precip. (%)	0	1	2	3	2	7	6
Days Since a Wetting Rain**	4.7	5.7	6.7	7.7			
Forecast ERC (Fuel Model X)	14.6	15.5	13.2	13.8	13.9	13.4	14.0
Forecast BI (Fuel Model X)	22.2	20.9	17.5	20.2	21.0	18.3	19.3
Forecast IC (Fuel Model X)	2.9	3.0	2.0	2.6	2.7	2.2	2.6
Forecast 100-Hr. FMC	19.7	19.1	18.9	18.9	18.9	18.9	18.9
Forecast 1000-Hr. FMC	22.2	22.1	22.0	21.9	21.7	21.6	21.5
KBDI	248.0						



#### Data Source:

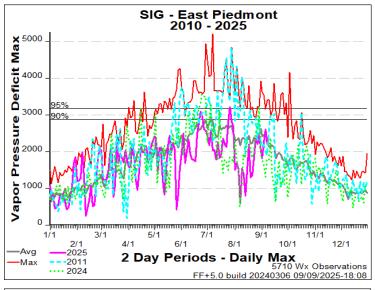
- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. The wind speed and direction, and probability of precipitation, are calculated as averages of the 1 am, 7 am, 1 pm, and 7 pm forecasts. The 20-foot wind speed is estimated from the 10-meter forecast using the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

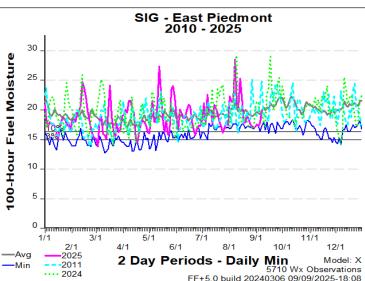
Values in the table above are averages from 3 stations in this FDRA:

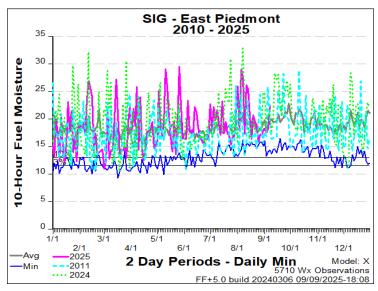
- Duke Forest (312501)
- Lexington (314602)
- Mt. Island Lake (316602)

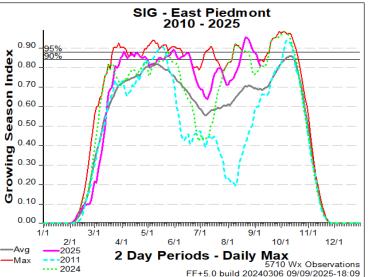
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!				
Avg. Max. Temp.	Less than 40°F	Between 40°F and 50°F	Greater than 50°F				
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%				
Avg. 20' Wind Speed	Less 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				

# FDRA – Eastern Piedmont

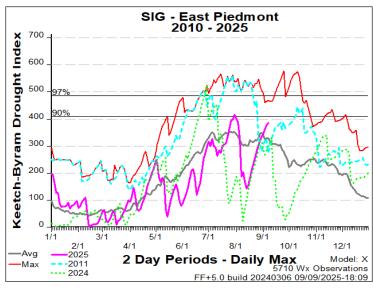


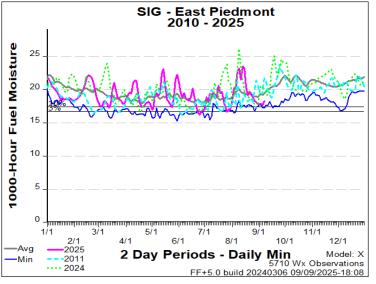


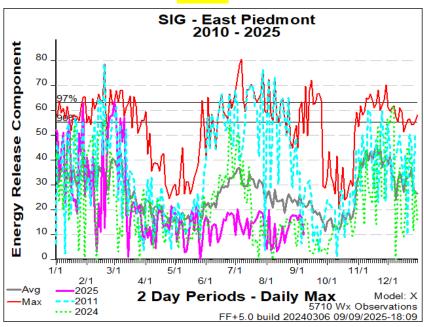




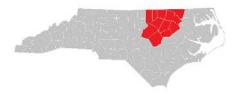






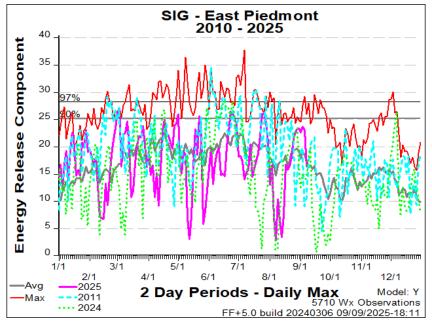


# FDRA – Eastern Piedmont

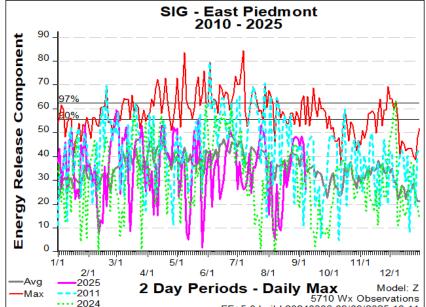


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#### **ERC-Y**



#### **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

# FDRA – Eastern Piedmont

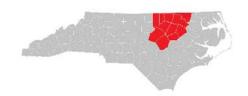
## **Weekly Outlook**

#### 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 09-Sep	WED 10-Sep	THU 11-Sep	FRI 12-Sep	SAT 13-Sep	SUN 14-Sep	MON 15-Sep
Avg. Max. Temp. (°F)	78	77	81	82	81	82	85
Avg. Min. Humidity (%)	48	61	52	45	48	48	49
Avg. 20' Wind Speed (mph)	8	6	4	5	6	4	4
Avg. Wind Direction*	NE	NNE	E	NNE	NE	ENE	SSW
Avg. Probability of Precip. (%)	3	3	2	4	5	8	9
Days Since a Wetting Rain**	1.0	2.0	3.0	4.0			
Forecast ERC (Fuel Model X)	19.5	16.2	15.1	17.0	17.2	17.4	17.6
Forecast BI (Fuel Model X)	33.7	27.4	23.5	30.0	30.7	25.4	26.4
Forecast IC (Fuel Model X)	4.3	2.6	2.0	3.2	3.3	2.8	3.0
Forecast 100-Hr. FMC	19.6	19.2	19.2	19.3	19.2	19.0	19.0
Forecast 1000-Hr. FMC	20.0	20.3	20.3	20.3	20.3	20.4	20.4
KBDI	389.8						



#### Data Source:

- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. 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:

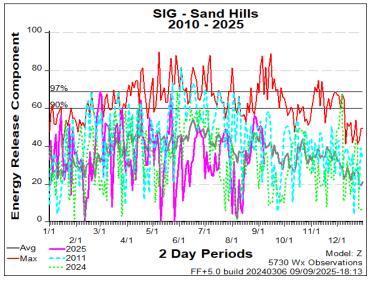
- Oxford Tobacco Research Stn (310841)
- Upper Coastal Plain Res Stn (312940)
- Lake Wheeler Rd Field Lab (314941)
- Central Crops Research Station (317441)

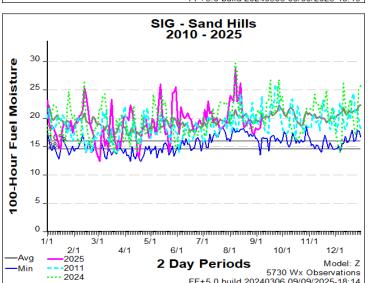
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!				
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F				
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%				
Avg. 20' Wind Speed	Less 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 defin	ed as 0.10" or greater. This is an averag	ge 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				

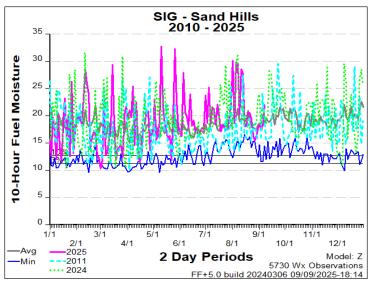
Other factors to consider when determining fire danger: sky conditions, precipitation amount, number of days since rain,

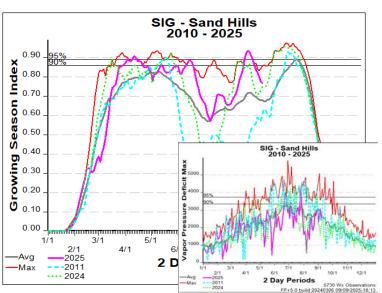
# FDRA – Sandhills

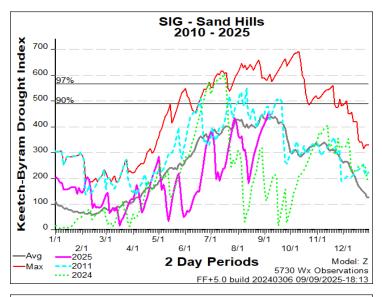


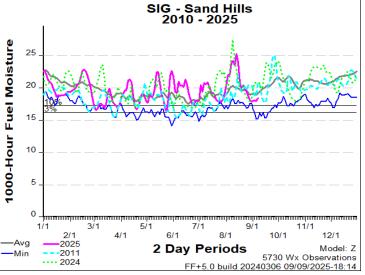












# FDRA – Sandhills

## **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 09-Sep	WED 10-Sep	THU 11-Sep	FRI 12-Sep	SAT 13-Sep	SUN 14-Sep	MON 15-Sep
Avg. Max. Temp. (°F)	79	79	83	83	82	85	87
Avg. Min. Humidity (%)	40	50	44	38	42	39	41
Avg. 20' Wind Speed (mph)	7	5	4	5	6	4	4
Avg. Wind Direction*	NE	NNE	NNE	NNE	NE	NNE	WSW
Avg. Probability of Precip. (%)	1	2	2	3	3	7	8
Days Since a Wetting Rain**	3.0	4.0	5.0	6.0			
Forecast ERC (Fuel Model Z)	43.5	42.7	38.0	40.4	40.4	40.5	41.8
Forecast BI (Fuel Model Z)	45.2	38.5	34.8	40.3	42.1	37.5	37.3
Forecast IC (Fuel Model Z)	10.8	8.5	6.2	9.0	9.2	8.2	9.0
Forecast 100-Hr. FMC	18.9	18.5	18.7	18.9	19.0	19.0	18.9
Forecast 1000-Hr. FMC	20.0	20.1	20.1	20.1	20.1	20.1	20.1
KBDI	448.0						



#### Data Source:

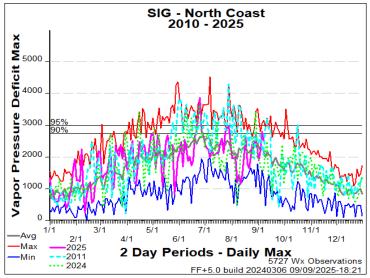
- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. The wind speed and direction, and probability of
  precipitation, are calculated as averages of the 1 am, 7 am, 1 pm, and 7 pm forecasts. The 20-foot wind speed is estimated from the 10meter forecast using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

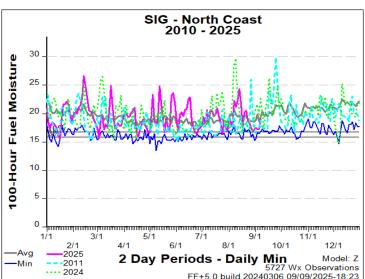
Values in the table above are averages from 3 stations in this FDRA:

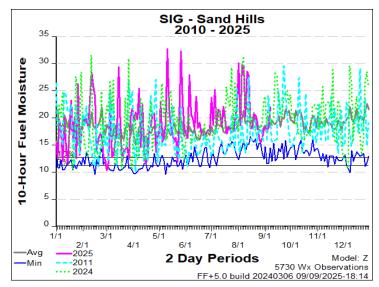
- Sandhills Research Station (317040)
- Rockingham (318202)
- Fort Liberty (318503)

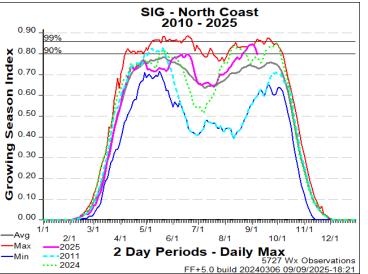
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!			
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F			
Avg. Min. Humidity	Greater than 40%	Between 30% and 40%	Less than 30%			
Avg. 20' Wind Speed	Less than 4 mph	Between 4 mph and 8 mph	Greater than 8 mph			
Avg. Wind Direction*	Criticality of wind	direction is highly dependent on burn ope	rations 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 o	determining fire danger: s	ky conditions, precipitation amount,	number of days since rain, and season			

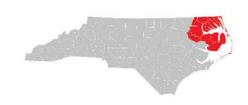
# FDRA – North Coast

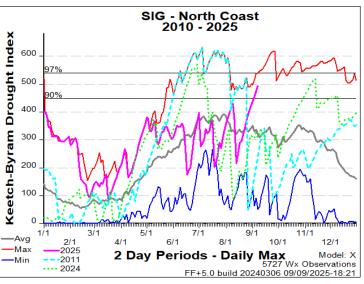


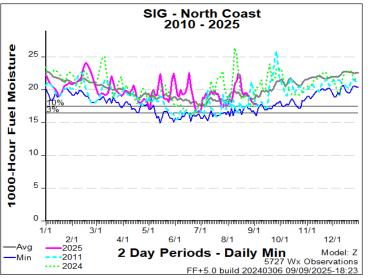


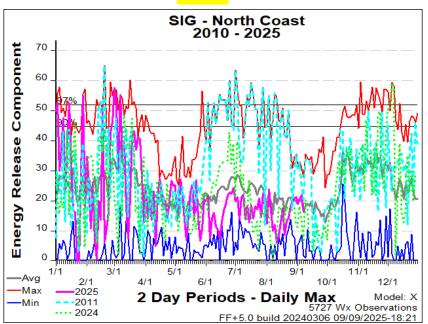








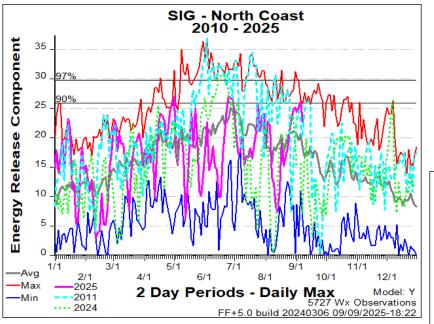




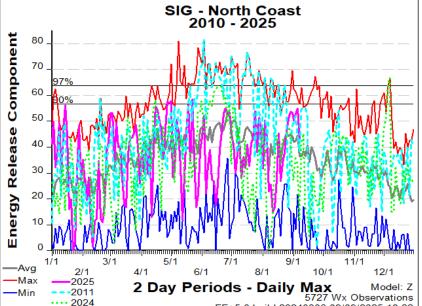
# FDRA – North Coast



#### **ERC-Y**



## **ERC-Z**



FF+5.0 build 20240306 09/09/2025-18:22

#### **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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# FDRA – North Coast

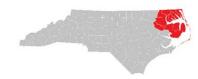
## **Weekly Outlook**

#### 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 09-Sep	WED 10-Sep	THU 11-Sep	FRI 12-Sep	SAT 13-Sep	SUN 14-Sep	MON 15-Sep
Avg. Max. Temp. (°F)	77	78	80	81	80	81	83
Avg. Min. Humidity (%)	72	72	59	52	53	52	54
Avg. 20' Wind Speed (mph)	11	7	6	6	8	6	5
Avg. Wind Direction*	NNE	S	SSE	NNE	NE	NNE	ESE
Avg. Probability of Precip. (%)	19	20	4	7	12	10	9
Days Since a Wetting Rain**	17.8	18.8	19.8	20.8			
Forecast ERC (Fuel Model X)	15.7	11.4	13.5	14.9	15.7	15.0	15.7
Forecast BI (Fuel Model X)	34.3	23.5	21.8	27.2	28.3	24.1	22.6
Forecast IC (Fuel Model X)	3.4	1.3	1.6	2.4	2.8	2.1	2.1
Forecast 100-Hr. FMC	19.8	20.5	20.8	20.7	20.4	20.3	20.2
Forecast 1000-Hr. FMC	19.5	19.5	19.6	19.8	20.0	20.1	20.3
KBDI	493.8						



#### Data Source:

and season

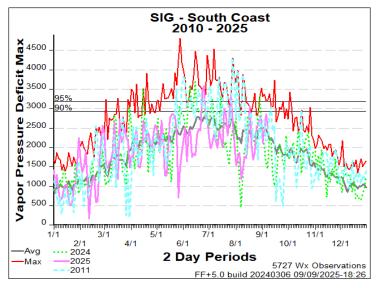
- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. The wind speed and direction, and probability of precipitation, are calculated as averages of the 1 am, 7 am, 1 pm, and 7 pm forecasts. The 20-foot wind speed is estimated from the 10-meter forecast using the 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 <u>NFDRS Forecast</u> product does not include precipitation amounts,
  which are used to adjust KBDI from day to day

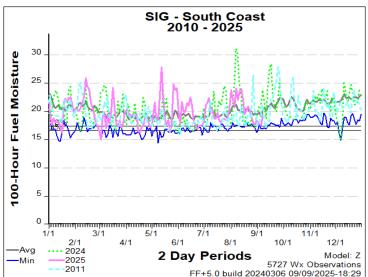
Values in the table above are averages from 4 stations in this FDRA:

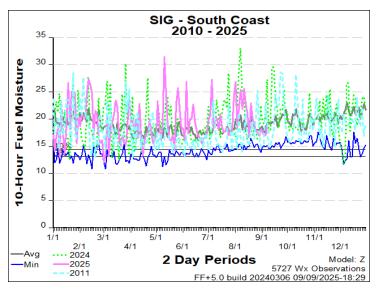
- Elizabeth City (311503)
- Greens Cross (313001)
- Pocosin Lakes (315201)
- Fairfield (317901)

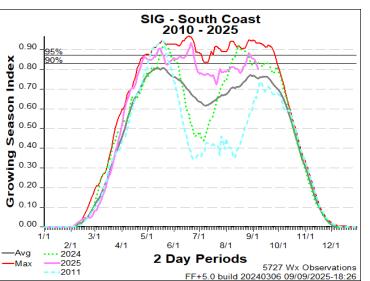
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!					
Avg. Max. Temp.	Less than 45°F	Between 45°F and 55°F	Greater than 55°F					
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%					
Avg. 20' Wind Speed	Less than 10 mph	Between 10 mph and 15 mph	Greater than 15 mph					
Avg. Wind Direction*	Criticality of wind dire	ction is highly dependent on burn ope	erations 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 about							
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					
	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,							

# FDRA – South Coast

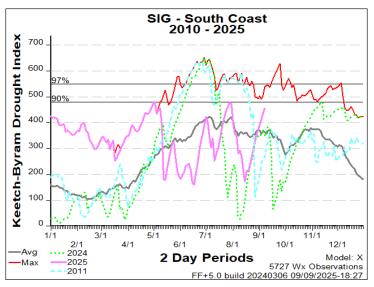


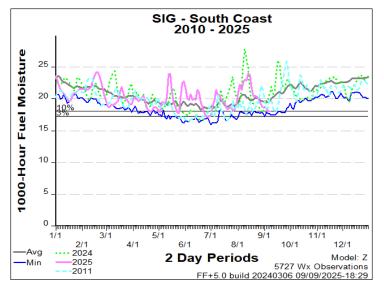


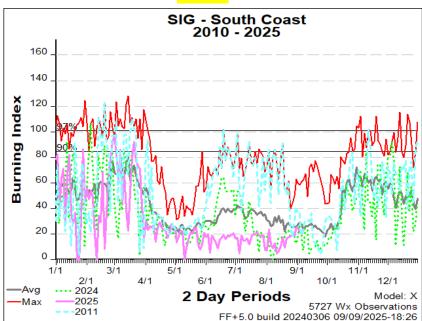








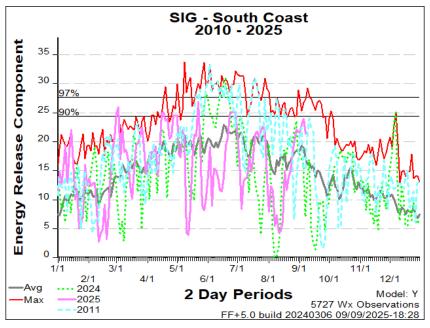




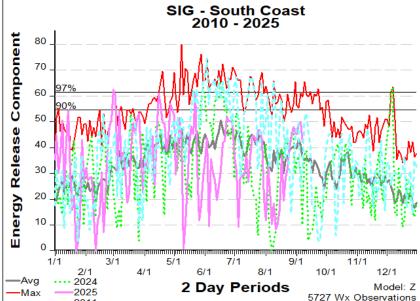
# FDRA – South Coast



## **ERC-Y**



## **ERC-Z**



FF+5.0 build 20240306 09/09/2025-18:29

#### **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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# 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 09-Sep	WED 10-Sep	THU 11-Sep	FRI 12-Sep	SAT 13-Sep	SUN 14-Sep	MON 15-Sep
Avg. Max. Temp. (°F)	79	81	83	83	83	83	86
Avg. Min. Humidity (%)	59	60	54	47	51	47	50
Avg. 20' Wind Speed (mph)	8	5	4	5	6	5	4
Avg. Wind Direction*	NNE	NE	ENE	NNE	NNE	NE	SW
Avg. Probability of Precip. (%)	7	7	2	7	10	6	7
Days Since a Wetting Rain**	10.6	11.6	12.6	13.6			
Forecast ERC (Fuel Model X)	16.5	13.2	13.5	15.2	15.5	15.2	15.8
Forecast BI (Fuel Model X)	31.0	22.1	20.8	26.1	27.0	23.8	22.6
Forecast IC (Fuel Model X)	3.8	2.1	1.9	3.0	3.2	2.7	2.7
Forecast 100-Hr. FMC	19.4	19.7	20.0	20.0	19.8	19.8	19.7
Forecast 1000-Hr. FMC	20.2	20.2	20.3	20.3	20.3	20.4	20.4
KBDI	451.7						



#### Data Source:

- Weather forecasts come from the National Weather Service's <u>Digital Forecast Database</u>. 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 <u>NFDRS Forecast</u> 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:

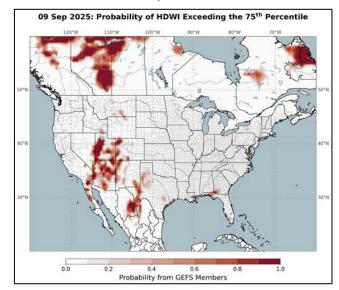
- Finch's Station (317501)
- Beaufort (317801)
- New Bern (319004)
- Turnbull Creek (319302)
- Hofmann Forest (319507)
- Whiteville (319701)
- Sunny Point (319803)

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 direc	tion is highly dependent on burn ope	rations and/or structures threatened.
Days Since a Wetting Rain**	A wetting rain is define	ed as 0.10" or greater. This is an avera	ge 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

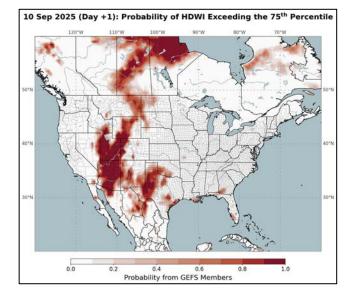
Other factors to consider when determining fire danger: sky conditions, precipitation amount, number of days since rai and season

## Hot-Dry-Windy Index (HDW)

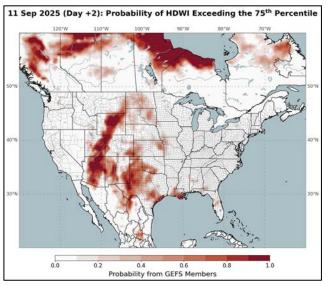
Tuesday > 75<sup>th</sup> Percentile



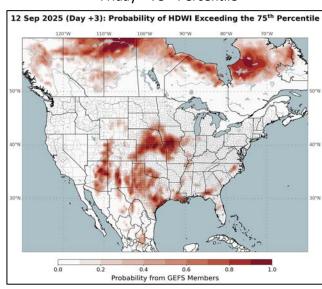
Wednesday > 75<sup>th</sup> Percentile



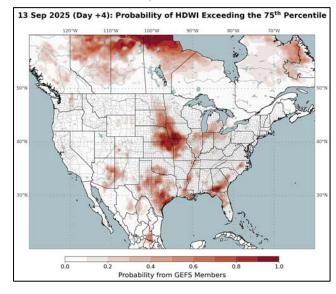
Thursday > 75<sup>th</sup> Percentile



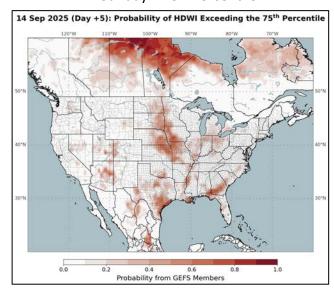
Friday > 75<sup>th</sup> Percentile



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

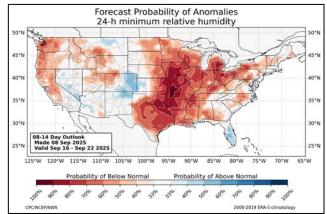


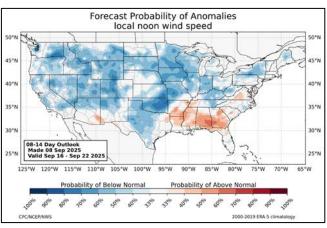
Sunday > 75<sup>th</sup> Percentile



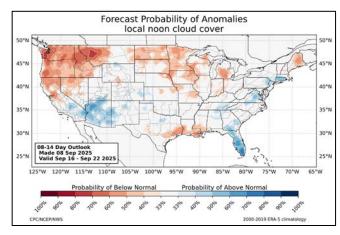
- Another visualization tool to pick up on broader weather, but with \*limitations
- Only uses Max VPD (atmospheric moisture & temp) & Max Wind Speed to generate outputs
- Coarse Resolution 0.5
   Degree Grid
- <u>No</u> Account of Local Fuel Conditions and Topo

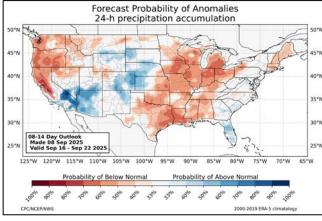
# Forecast Probability of Anomalies 24-h maximum temperature 50'N 45'N 40'N 35'N 30'N 30'N 25'N 125'W 120'W 115'W 110'W 105'W 100'W 95'W 90'W 85'W 80'W 75'W 70'W 65'W Probability of Below Normal Probability of Above Normal



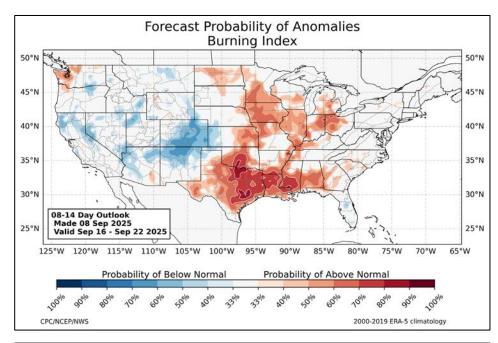


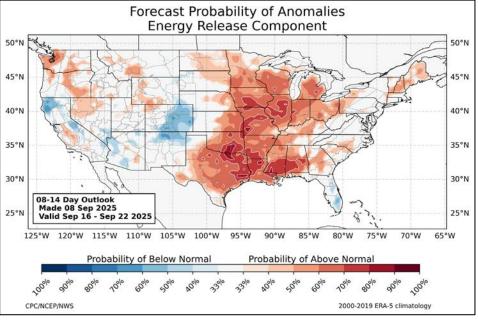
# Week Two Forecast Anomalies: 9/16 - 9/22





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

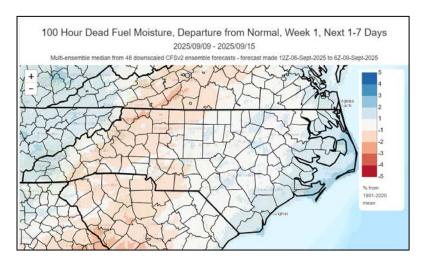




## Modeled Departure from Normal by Week: 100-hr Fuels

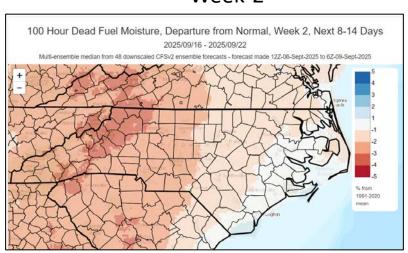
Output relies on experimental forecast outputs and is subject to change

#### Week-1



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, wind and overnight RH recovery trends.

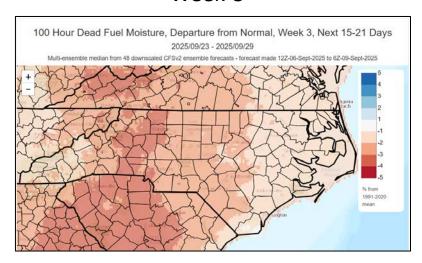
#### Week-2



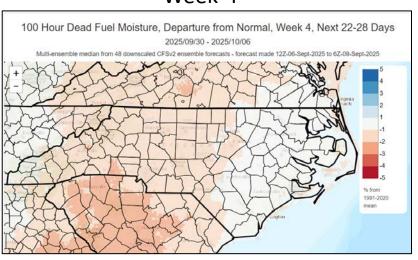
Note that <u>modeled</u> impacts of warmer/drier conditions (lower % mc or "worse") is focused most intensely on Weeks 2-3 in the NW & Central Mtns, with the East favoring near normal 100-hr fuel moisture conditions.

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

#### Week-3



#### Week-4



From: https://climatetoolbox.org/tool/Climate-Mapper

## SACC Daily Outlook, Selected Snips from Tuesday - 9/9

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



## **SACC Daily Outlook**

Tuesday, September 9, 2025





- Coastal Flood Advisories for much of the East Coast (King Tides)
- . Heat Advisories in PR and the USVI

## Today's Weather Outlook



- High pressure extending from New England to the Mississippi Valley will maintain dry conditions for most of the Southern Area today
- Temperatures in the mountains of NC and VA were as low as the mid-30s this morning, and patchy frost could occur again late tonight
- Breezy conditions will impact the eastern states, in addition to the High Plains of OK and TX
- Showers and storms will become widespread over the FL peninsula, but wet weather depicted elsewhere is forecast to be isolated
- The Caribbean islands will be hot and humid with spotty afternoon showers and storms

#### **Record Heat This Weekend and Next Week**



- Temperatures are forecast to quickly rebound through the week ahead after a pleasant start in most areas
- A strong high pressure ridge is forecast to build from the Southern Plains to the Great Lakes this weekend – a pattern that may persist well into next week
- Forecasted average temperature anomalies for the Saturdayto-Wednesday period are depicted
- The warmest readings relative to mid-September averages are expected from the Plains into the Mississippi, Ohio and Tennessee Valleys, where near-record to record highs in the 90s to low 100s will become common
- This heat will be accompanied by very dry air, with min. RH in the driest spots in the teens and 20s; recoveries at night will be dependent on winds and sheltering
- Northeasterly winds will likely maintain cooler weather along the East Coast, with much warmer conditions just inland

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



## **SACC Daily Outlook**

Tuesday, September 9, 2025



#### Significant Fire Potential Outlook Today



- Dry air will encompass much of the region, with minimum RH as low as 20-35% in areas with low significant fire potential
- Below average temperatures will be the main mitigating factor, while light winds are expected in many areas, as well
- The Piedmont and Sandhills region from VA into the Carolinas and eastern GA will see breezy conditions, with NE gusts as high as 20-25 mph that could lead to escaped intentional burns
- S/SW wind gusts of 20-30 mph will be common in OK and northern TX, but RH will be on the increase

#### Significant Fire Potential Outlook Wednesday



- Increasing temperatures Wednesday will allow for lower humidity in most of the geographic area
- Look for RH as low as 15-30% in areas with low significant fire potential forecasted
- Northerly wind gusts near 20 mph will affect VA into the Carolinas and GA, with light winds in the Mississippi Valley and eastern Plains

#### Significant Fire Potential Outlook Thursday



- Fuels will continue to dry throughout most of the region, increasing the footprint of receptive fuels
- Above average temperatures will become widespread except in the eastern states, with RH as low as 15-25% in northern and western TX into southwestern OK, where S wind gusts of 15-30 mph will develop
- RH elsewhere will be as low as 20-30%, with light winds in the eastern Plains and Mississippi Valley a mitigating factor and wind gusts near 15 mph but cooler temperatures factoring into risks over the Appalachians and eastern states

National 7-Day Significant Fire Potential Outlook High Risk Trigger Definitions



## **SACC Daily Outlook**

Tuesday, September 9, 2025







- The Atlantic remains in a suppressed phase for tropical cyclone development, though several waves may eventually have to be watched by the weekend
- A tropical wave southeast of the Caribbean is forecast to track towards the USVI and PR Sunday or Monday, with heavy rain the main threat at this time
- Low pressure systems will continue to form along fronts off the East Coast, enhancing winds and coastal flooding at times for VA into the Carolinas and GA, but any tropical risks appear to remain low
- Tropical waves emerging from Africa are a bit more likely to eventually develop into depressions or storms next week over the central or eastern Atlantic, while there is limited potential in the western Caribbean and Gulf next week, as well

#### Week Two 100-Hour Dead Fuel Moisture



- With persistent dry air and next week's heat, 100-hour fuels are likely to become unusually dry over a broad area from the Plains to the Appalachians
- This image depicts the probability for 100-hour dead fuel moisture values to be below the 10<sup>th</sup> percentile for the week two period, with darker blue areas forecasted to be driest
- Fire danger is likely to increase as a result, especially in areas where setting rain will not have occurred in at least 2-3 weeks
- Green fuels will remain a mitigating factor, but some drought curing of herbaceous fuels may be likely in all of the highlighted areas; fire occurrence will most likely be highest from eastern TX into parts of OK, AR, LA, MS and AL in addition to the central Caroline.

#### Flash Drought Onset Likely



- Dry weather, recent rainfall deficits and high evaporative demand are forecast to result in rapid drought onset, or flash drought development, over parts of AL, MS, AR, TN and KY by September 22<sup>nd</sup>
- Moderate and severe drought is likely to become more widespread in these areas, and pockets of extreme drought can not be ruled out by the end of the month if this pattern persists as anticipated
- There are indications more of the Plains, Gulf coastal plain and Appalachian states could see worsening or developing drought the next few weeks, as well
- Though an uptick in tropical storm and hurricane potential is still expected in the latter half of September into October, confidence is low in where these systems and their rainfall will track

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

# Significant Wildland Fire Potential Outlook: Updated 9/1/25 <a href="https://www.nifc.gov/nicc-files/predictive/outlooks/monthly\_seasonal\_outlook.pdf">https://www.nifc.gov/nicc-files/predictive/outlooks/monthly\_seasonal\_outlook.pdf</a>

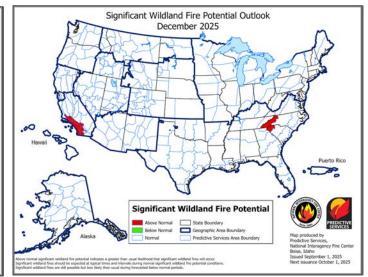
## September



#### **October**







From Southern Area September Seasonal Update Briefing



#### **Takeaways**



- · Avoiding drought in a broad part of the region this fall will be dependent on tropical activity
- · Long-range guidance, Gulf/Caribbean SSTs and developing La Niña suggest a busy end to the hurricane season
  - Impacts most likely to PR/USVI and Florida, but elsewhere too?
- · Early season frosts in the Appalachians and potential drought could bring an early onset of the fall fire season
  - Helene's continued/increasing impacts the primary contributor to the above normal outlook in the western Carolinas
- Climatology and abundant grass loads factored into the Plains outlook
- · Underlying risks for significant activity through the dormant season in the Plains and within Helene's footprint

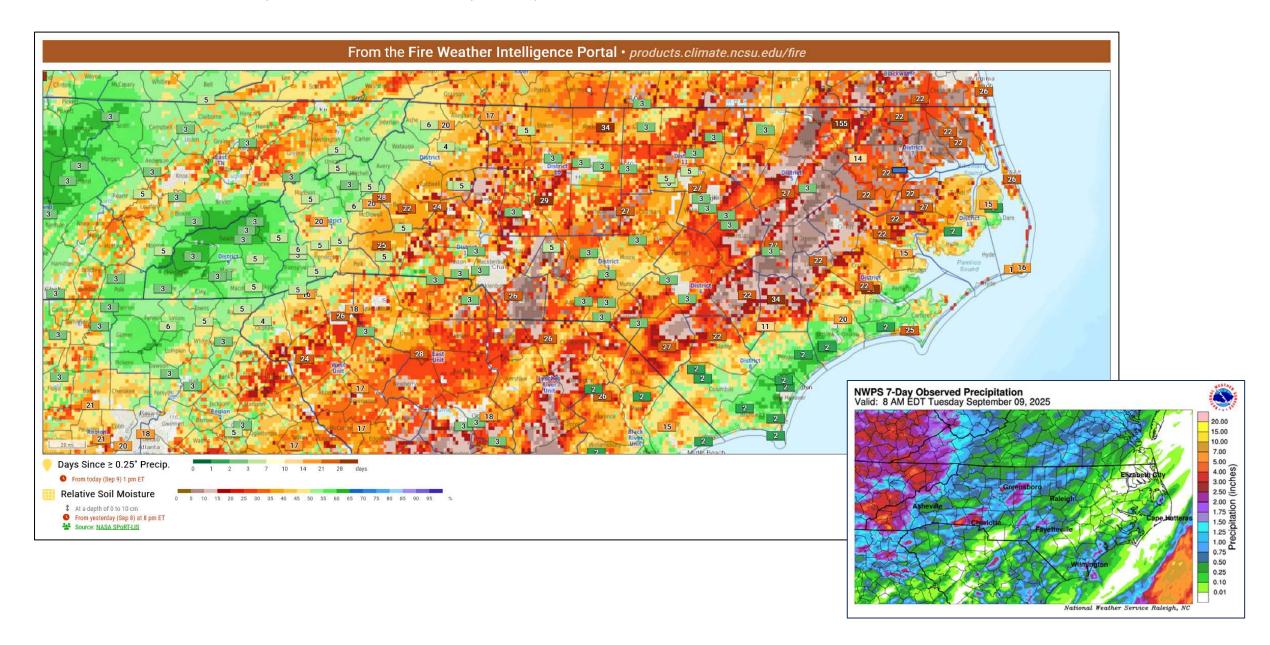
\*A significant fire is one that requires resources from outside the district (other than aviation). IA potential is based more on shorter term weather factors. Just a few days of dry weather can increase IA activity considerably as we have consistently seen from year to year.





- \*Earlier leaf drop on sensitive tree species example of Yellow Poplar. Note good grass crop from earlier rains along forest roads — now in decline. This may pose a problem with hunting season approaching, especially when episodes of low RH and warm temps align with vehicle/equipment use. (Top Left)
- \*Low water level in canal/ditch network noted in Van Swamp Game Land (Wash Co., Bottom Left)
- \*Examples of canopy closure still providing wind interception and fuel temp moderation – Coastal and Mountain.

# Days since ≥ 0.25" precip & 0-10 cm Relative Soil Moisture



#### **Overall Summary**

FDRAs continue to benefit from seasonally green conditions, despite increasing lack of rain and decline in 100-hour dead fuel moistures.

Overall, declines in dead fuel moisture have generally been offset by effective green (heat sink), residual soil moisture, and higher dew points that support reasonable nighttime recovery. Statewide fire activity and control difficulty have remained near seasonal norms through early September. There are notable exceptions where persistent dryness has aligned with fire effective weather to enhance difficulty of control and resulting fire activity/size (see slide #2).

The 7- and 30-day PNP maps highlight the distribution of recent rainfall events. Soil moisture is continuing to be drawn down, especially at shallow depths. The FF+ charts show KBDI values well above normal for the period in central/northern coastal areas. Benefits of "green" will continue to decline as we move into Fall.

Early browning of roadside/yard grasses & leaf drop could lead to more ignitions spreading into forested areas. Increased ignition risk due to hunting season related equipment use will also be another factor to consider.

Risk of atypical reburn on older wildfires or prescribed burns will also need to be considered if the drying trend intensifies.

Fire activity and control difficulty can increase rapidly if live fuels and dead fuels reach critical dryness in combination with conducive weather. Repeated early bouts of frost/freeze conditions at higher elevations + drying soils could lead to an earlier than normal leaf drop & earlier start of Fall Fire Season 2026, as noted by the SA discussion.

\*\*\*Hurricane season remains an important factor, as storm tracks could quickly alter drought, fuel and general moisture conditions.\*\*\*

**Special Note:** Tropical Storm Helene impact areas remain an outlier for the Mountain and Foothills regions. Even if precipitation returns to normal and drought remains absent entering fall 2025, accessibility challenges, increased fuel loading, and related issues will persist. After frost/freeze events & subsequent dormancy remove the moderating effect of green vegetation, post-hurricane impacts will again contribute to atypical/higher fire intensity and difficulty of control.

**Reminder:** The NFDRS premise reflects landscape-scale **fire danger**—rather than site-specific **fire behavior**. FDRA values are based on averages across stations.

The transition from WIMS to FEMS is scheduled for later in September (see previous slides). The data feed from WIMS will shut down at the end of September, with FEMS then becoming the authoritative source of NFDRS at that time.

#### Predicted Adjective Rating - Fire Danger (ERC & 100-HR)

Forecasted Adjective Rating for FDRAs in North Carolina									
FDRA	Tue Sep 9	Wed Sep 10	Thu Sep 11	Fri Sep 12	Sat Sep 13	Sun Sep 14	Mon Sep 15		
Southern Highlands 🗘 X	L								
Central Mountains 🗘 x	L:		М	М	M	М	M		
Northern Highlands 🗘 X	М	М	М	М	M	М	М		
Blue Ridge 💠 X	L								
Western Piedmont 🗘 x	М	M	М	М	M	М	М		
Sandhills 🗘 Z	М	М	М	М	М	М	М		
Eastern Piedmont 🗘 x	М	М	М	М	М	М	М		
Southern Coast 🗘 x	L			L		L			
Northern Coast 🗘 X	ı,	i i	L	i i	L	i.	L		

#### 100-hr Fuels, Modeled Trends - Percentiles

fire  Forecasted Dead FM (100-Hr) Pctl. for FDRAs in North Carolina								
FDRA	Tue Sep 9	Wed Sep 10	Thu Sep 11	Fri Sep 12	Sat Sep 13	Sun Sep 14	Mon Sep 15	
Southern Highlands 🗘 x	59.7%	46.0%	31.0%	31.0%	31.0%	31.0%	31.0%	
Central Mountains 🗘 X	49.8%	34.3%	34.3%	34.3%	34.3%	34.3%	34.3%	
Northern Highlands 🗘 X	50.6%	50.6%	35.9%	21.0%	21.0%	21.0%	21.0%	
Blue Ridge 💠 X	23.5%	23.5%	23.5%	23.5%	23.5%	34.2%	34.2%	
Western Piedmont 🗘 x	72.4%	62.7%	62.7%	62.7%	62.7%	62.7%	62.7%	
Sandhills 🗘 Z	55.6%	40.5%	55.6%	55.6%	55.6%	55.6%	55.6%	
Eastern Piedmont 🗘 x	68.6%	55.5%	55.5%	55.5%	55.5%	55.5%	55.5%	
Southern Coast 💠 x	46.5%	60.0%	60.0%	60.0%	60.0%	60.0%	60.0%	
Northern Coast 🗘 X	64.9%	64.9%	75.2%	75.2%	64.9%	64.9%	64.9%	

#### 1000-hr Fuels, Modeled Trends - Percentiles

fire Forecasted Dead FM (1000-Hr) Pctl. for FDRAs in North Carolina									
FDRA	Tue Sep 9	Wed Sep 10	Thu Sep 11	Fri Sep 12	Sat Sep 13	Sun Sep 14	Mon Sep 15		
Southern Highlands 🗘 X	87.0%	87.0%	87.0%	87.0%	87.0%	76.3%	76.3%		
Central Mountains 🗘 x	92.5%	92.5%	83.1%	83.1%	83.1%	83.1%	83.1%		
Northern Highlands 🗘 X	91.2%	91.2%	91.2%	80.1%	80.1%	80.1%	80.1%		
Blue Ridge 💠 X	50.8%	50.8%	35.2%	35.2%	35.2%	35.2%	35.2%		
Western Piedmont 🗘 x	87.4%	87.4%	87.4%	87.4%	87.4%	87.4%	76.6%		
Sandhills 🗘 Z	64.0%	64.0%	64.0%	64.0%	64.0%	64.0%	64.0%		
Eastern Piedmont 🗘 x	62.9%	62.9%	62.9%	62.9%	62.9%	62.9%	62.9%		
Southern Coast 🗘 x	49.1%	49.1%	49.1%	49.1%	49.1%	49.1%	49.1%		
Northern Coast 💠 X	38.5%	38.5%	55.0%	55.0%	55.0%	55.0%	55.0%		