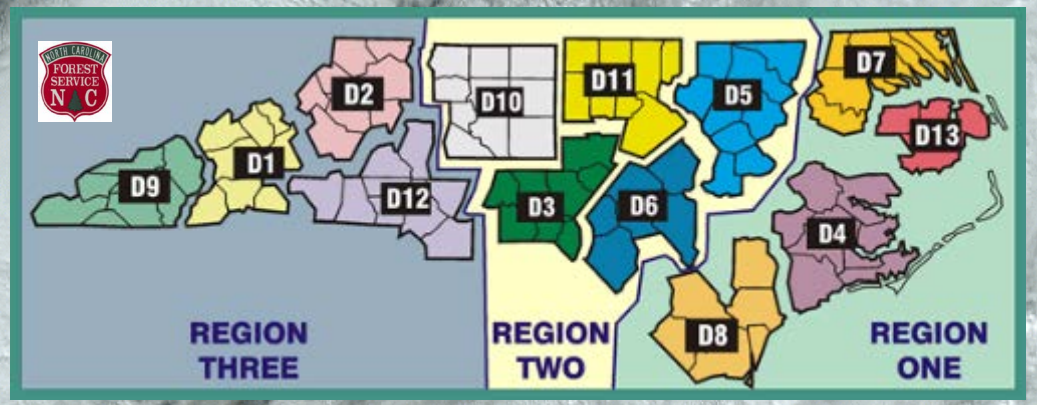
Statewide Seasonal Fire Danger Assessment



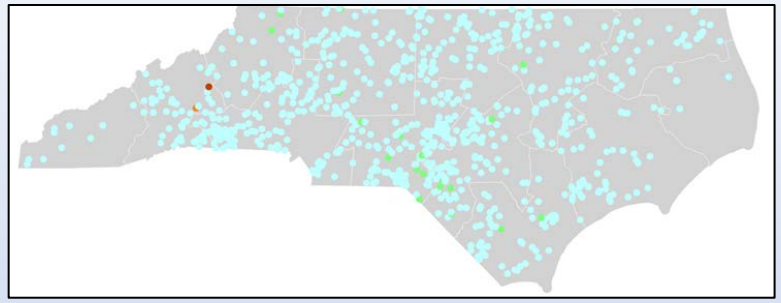
- February 8, 2025 Update -

1/22/25 Snow Cover

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

Incident Activity

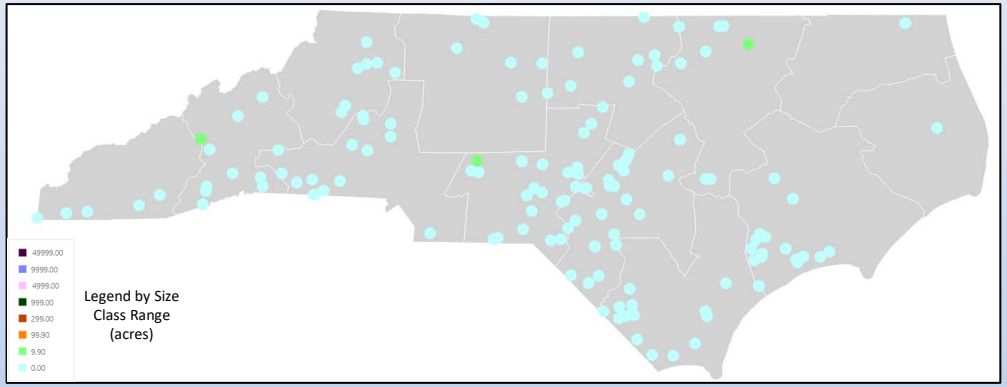
January 1 - 31



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

7-Day Activity: 1/31 – 2/6, 2025

Report: Business Intelligence Module, Response Trends Map



Statewide Context

January: 10-yr avg is 326 fires for 524 acres

***February: 10-yr avg is 576 fires for 1,494 acres**

March: 10-yr avg is 913 fires for 4,727 acres

April: 10-yr avg is 659 fires for 6,481 acres

May: 10-yr avg is 317 fires for 1,241 acres

June: 10-yr avg is 221 fires for 2,408 acres

July: 10-yr avg is 183 fires for 626 acres

August: 10-yr avg is 137 fires for 420 acres

September: 10-yr avg is 171 fires for 383 acres

October: 10-yr avg is 226 fires for 1,895 acres

November: 10-yr avg is 465 fires for 6,046 acres

December: 10-yr avg is 277 fires for 427 acres

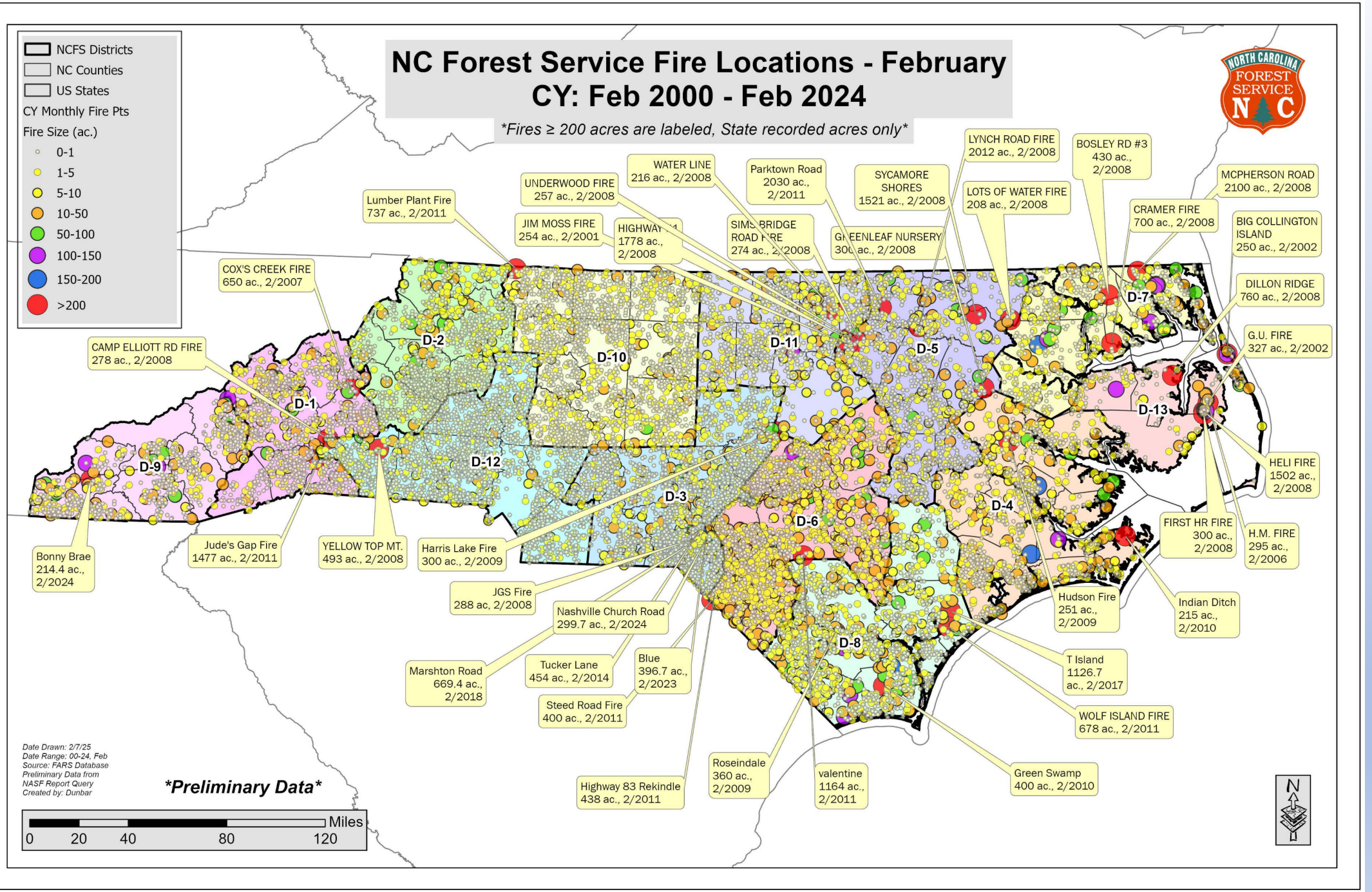
(10-yr Statewide averages, above, are based on FARS 2014-2023 Data)

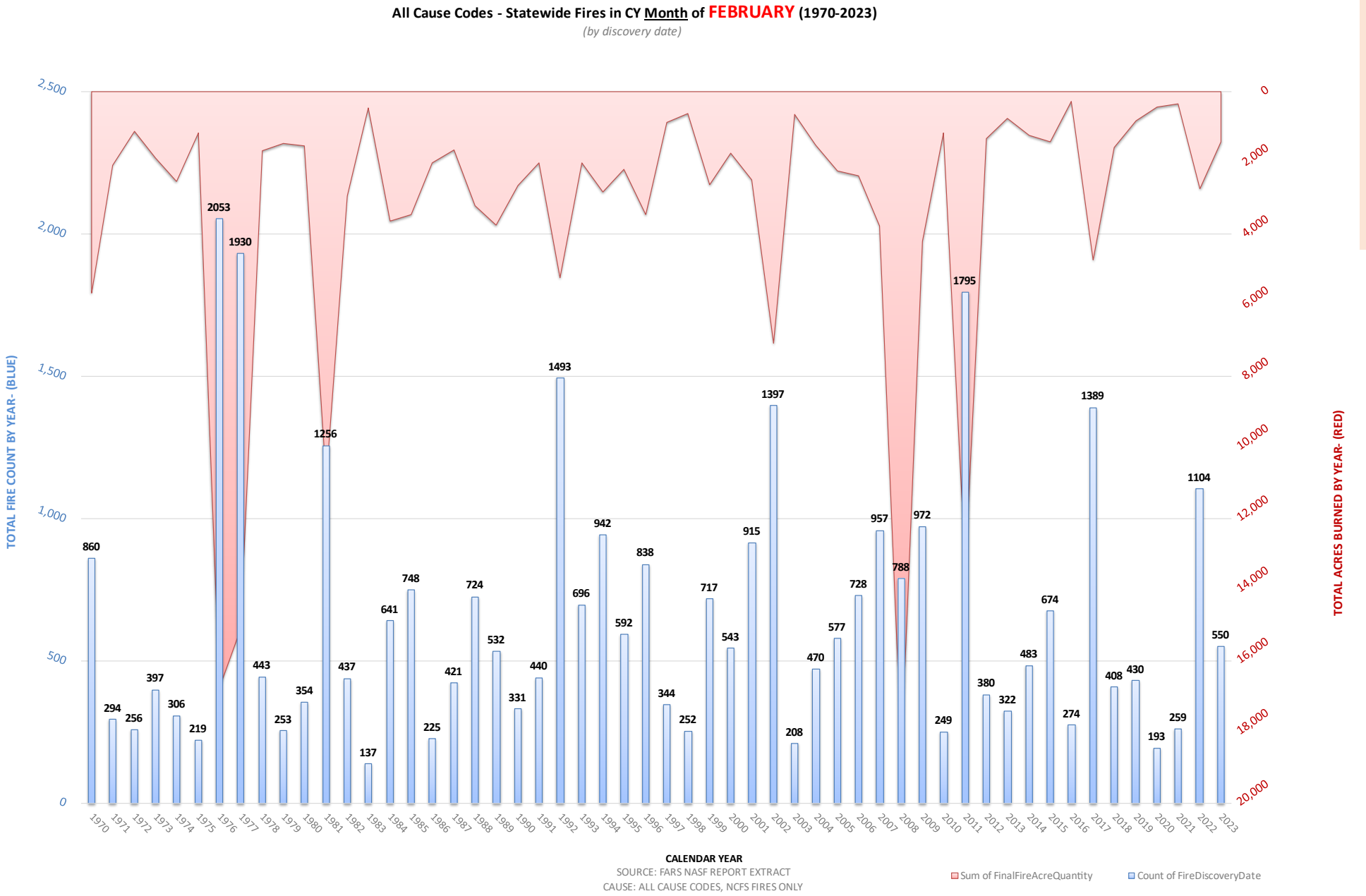
NCFS – By Region				
MTD Fire Activity (Does Not Include Federal Ownerships)				
Data Source:	Signal 14 Regional Activity Summary Report (Signal 14 is a daily snapshot in time)			
Date Range:	2/1 – 2/6, 2025			
Area	Wildfire Count	Wildfire Acres	RX Count (State & Private)	RX Acres (State & Private)
R1	36	54.9	5	123
R2	63	79.2	30	1,705
R3	40	32.6	8	33

Largest incidents last **7-Days** (Ending 2/6):

from fiResponse & preliminary reporting only

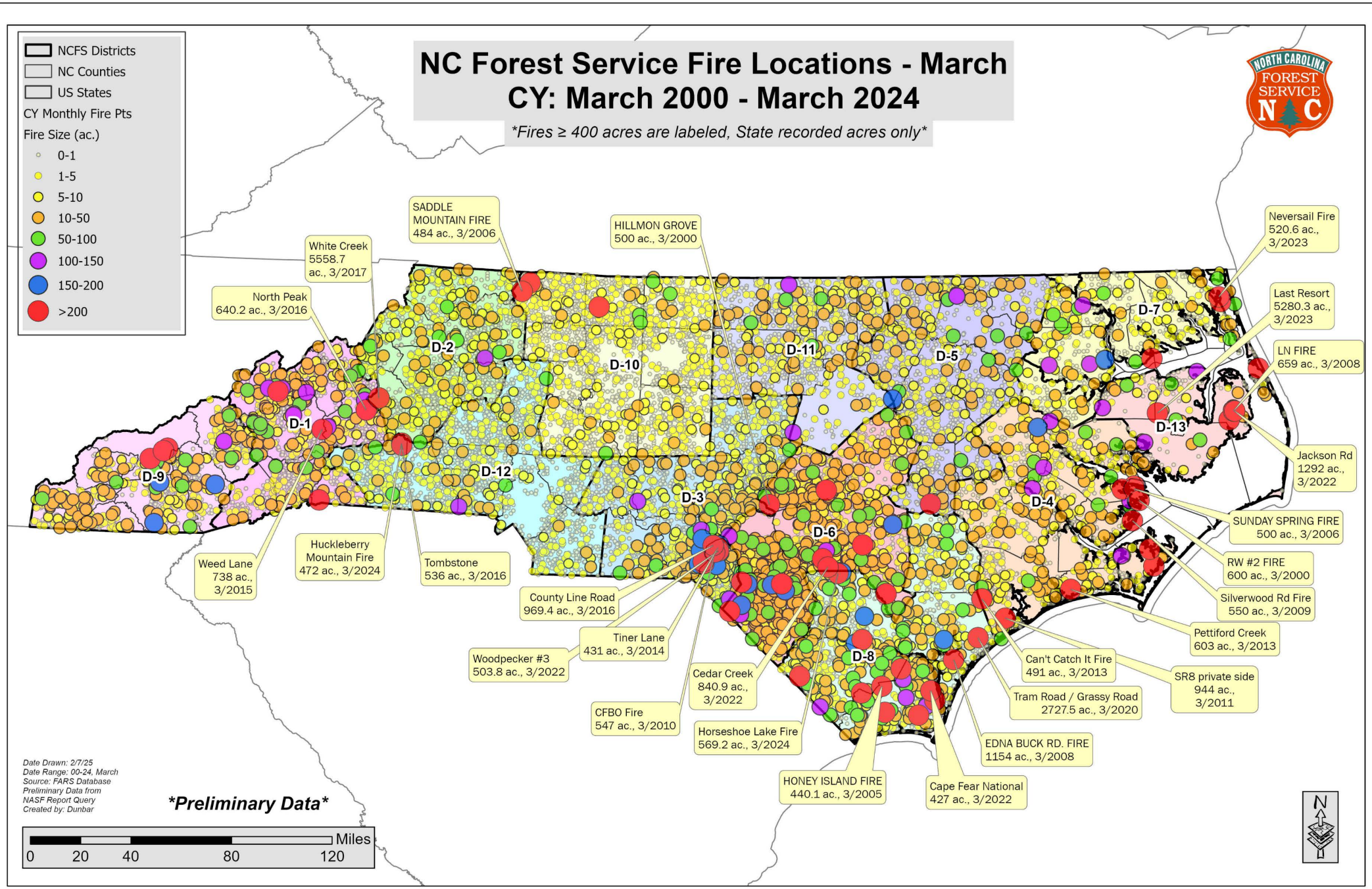
Incident Name	Discovery Date	Region	District	County	Acres
Old Pasture	2/4/2025	Region 2	District 5	Halifax County	13.00
Peepeye Cove	2/4/2025	Region 3	District 1	Buncombe County	11.01
Hearne Road	2/3/2025	Region 2	District 3	Stanly County	10.00
Rollover Creek Fire	2/1/2025	Region 1	District 4	Craven County	9.00
Rowan Rd	2/4/2025	Region 2	District 6	Robeson County	8.50
Corbett Fire	2/4/2025	Region 1	District 4	Onslow County	7.00
McBryde Mill Rd	1/31/2025	Region 2	District 6	Hoke County	5.00
Westbrook Fire	2/4/2025	Region 1	District 4	Carteret County	5.00
Redwood Rd	2/4/2025	Region 2	District 11	Durham County	5.00
Swamp fox Hwy	2/4/2025	Region 1	District 8	Columbus County	4.00

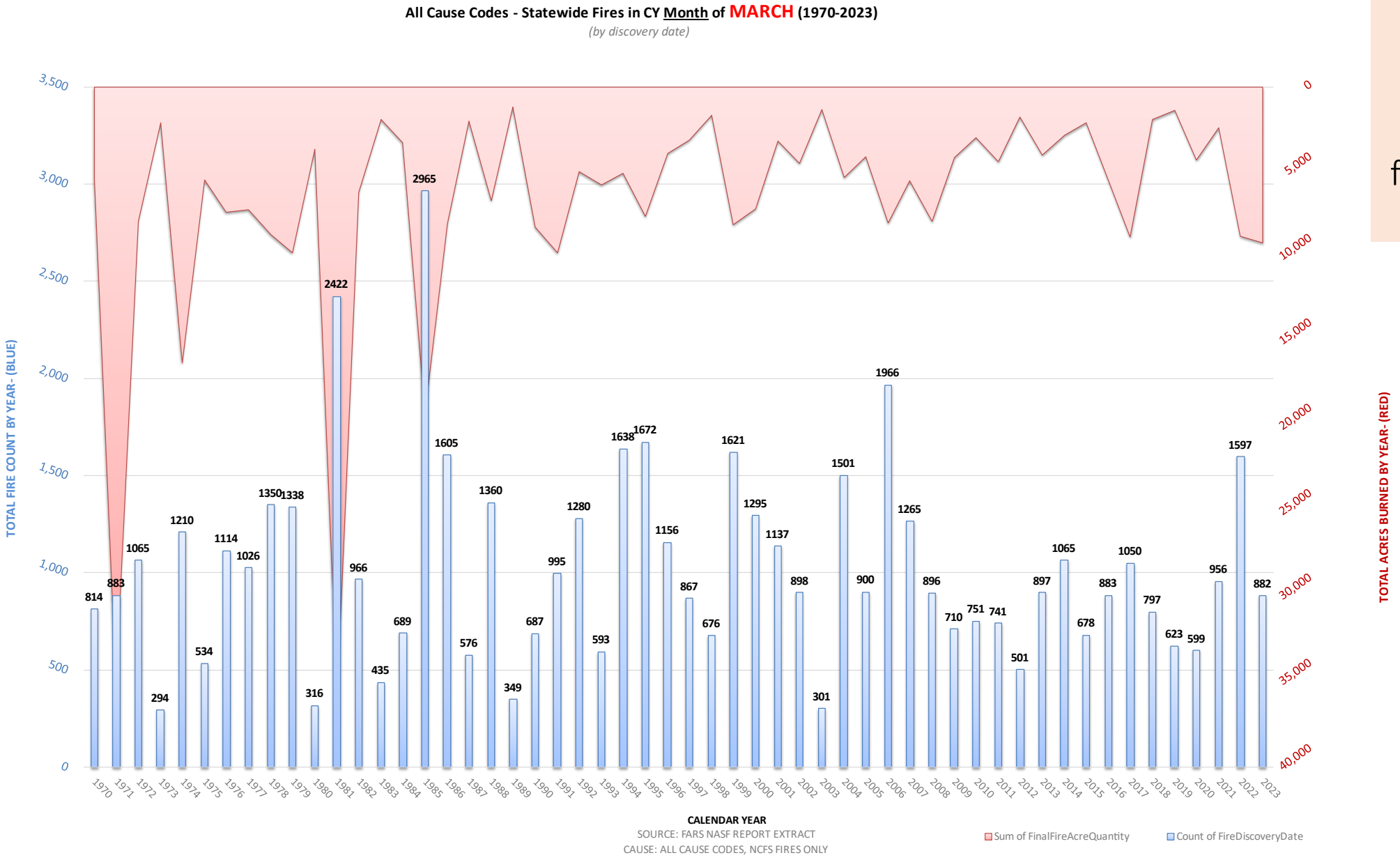

NC Forest Service Fire Locations - February
CY: Feb 2000 - Feb 2024
Fires ≥ 200 acres are labeled, State recorded acres only
NORTH CAROLINA FOREST SERVICE NC
NCFS Districts
NC Counties
US States
CY Monthly Fire Pts
Fire Size (ac.)
0-1
1-5
5-10
10-50
50-100
100-150
150-200
>200
D-1
D-2
D-3
D-4
D-5
D-6
D-7
D-8
D-9
D-10
D-11
D-12
D-13
Lumber Plant Fire 737 ac., 2/2011
COX'S CREEK FIRE 650 ac., 2/2007
CAMP ELLIOTT RD FIRE 278 ac., 2/2008
Bonny Brae 214.4 ac., 2/2024
Jude's Gap Fire 1477 ac., 2/2011
YELLOW TOP MT. 493 ac., 2/2008
UNDERWOOD FIRE 257 ac., 2/2008
JIM MOSS FIRE 254 ac., 2/2001
WATER LINE 216 ac., 2/2008
HIGHWAY 1778 ac., 2/2008
Parktown Road 2030 ac., 2/2011
SIMS BRIDGE ROAD FIRE 274 ac., 2/2008
GREENLEAF NURSERY 300 ac., 2/2008
SYCAMORE SHORES 1521 ac., 2/2008
LYNCH ROAD FIRE 2012 ac., 2/2008
LOTS OF WATER FIRE 208 ac., 2/2008
BOSLEY RD #3 430 ac., 2/2008
CRAMER FIRE 700 ac., 2/2008
MCPHERSON ROAD 2100 ac., 2/2008
BIG COLLINGTON ISLAND 250 ac., 2/2002
DILLON RIDGE 760 ac., 2/2008
G.U. FIRE 327 ac., 2/2002
HELI FIRE 1502 ac., 2/2008
H.M. FIRE 295 ac., 2/2006
FIRST HR FIRE 300 ac., 2/2008
Indian Ditch 215 ac., 2/2010
Hudson Fire 251 ac., 2/2009
T Island 1126.7 ac., 2/2017
WOLF ISLAND FIRE 678 ac., 2/2011
Green Swamp 400 ac., 2/2010
valentine 1164 ac., 2/2011
Roseindale 360 ac., 2/2009
Highway 83 Rekindle 438 ac., 2/2011
Steed Road Fire 400 ac., 2/2011
Marshton Road 669.4 ac., 2/2018
Tucker Lane 454 ac., 2/2014
Blue 396.7 ac., 2/2023
Nashville Church Road 299.7 ac., 2/2024
JGS Fire 288 ac, 2/2008
Harris Lake Fire 300 ac., 2/2009
Date Drawn: 2/7/25
Date Range: 00-24, Feb
Source: FARS Database
Preliminary Data from NASF Report Query
Created by: Dunbar
Preliminary Data
Miles
0 20 40 80 120
N



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

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


NC Forest Service Fire Locations - March
CY: March 2000 - March 2024
Fires ≥ 400 acres are labeled, State recorded acres only
NCFS Districts
NC Counties
US States
CY Monthly Fire Pts
Fire Size (ac.)
0-1
1-5
5-10
10-50
50-100
100-150
150-200
>200
SADDLE MOUNTAIN FIRE 484 ac., 3/2006
HILLMON GROVE 500 ac., 3/2000
White Creek 5558.7 ac., 3/2017
North Peak 640.2 ac., 3/2016
Neversail Fire 520.6 ac., 3/2023
Last Resort 5280.3 ac., 3/2023
LN FIRE 659 ac., 3/2008
Jackson Rd 1292 ac., 3/2022
SUNDAY SPRING FIRE 500 ac., 3/2006
RW #2 FIRE 600 ac., 3/2000
Silverwood Rd Fire 550 ac., 3/2009
Pettiford Creek 603 ac., 3/2013
Can't Catch It Fire 491 ac., 3/2013
SR8 private side 944 ac., 3/2011
Tram Road / Grassy Road 2727.5 ac., 3/2020
EDNA BUCK RD. FIRE 1154 ac., 3/2008
Cape Fear National 427 ac., 3/2022
HONEY ISLAND FIRE 440.1 ac., 3/2005
Horseshoe Lake Fire 569.2 ac., 3/2024
Cedar Creek 840.9 ac., 3/2022
CFBO Fire 547 ac., 3/2010
Woodpecker #3 503.8 ac., 3/2022
Tiner Lane 431 ac., 3/2014
County Line Road 969.4 ac., 3/2016
Tombstone 536 ac., 3/2016
Huckleberry Mountain Fire 472 ac., 3/2024
Weed Lane 738 ac., 3/2015
D-1
D-2
D-3
D-4
D-5
D-6
D-7
D-8
D-9
D-10
D-11
D-12
D-13
Date Drawn: 2/7/25
Date Range: 00-24, March
Source: FARS Database
Preliminary Data from
NASF Report Query
Created by: Dunbar
Preliminary Data
Miles
0 20 40 80 120
N



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

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

Southern Area Daily Outlook Page:

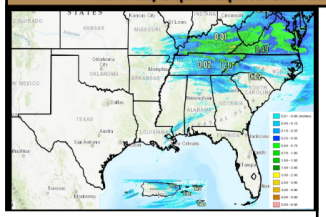
https://gacc.nifc.gov/sacc/resources/predictive/sacc-daily-outlook.pdf

Product provides weekly context for Southern Area (Friday - 2/7 Outlook shown) & is typically updated daily during high SA Planning Levels.

SACC Daily Outlook

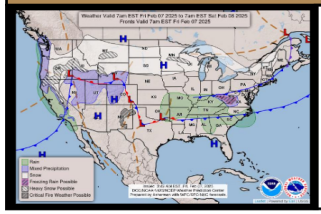
Friday, February 7, 2025

Rainfall/Liquid Equivalent Amounts for the Past 24 Hours



- The Southern Area was mostly dry for the last 24 hours.
- Most of Kentucky and Virginia, and portions of Tennessee, North Carolina, Northern Alabama, North Georgia, and Puerto Rico did see some showers.
  - Kentucky, Virginia, northern North Carolina, and north/east Tennessee saw accumulations up to 3 inches.
  - Other areas saw up to a quarter of an inch of rain.

The Weather Outlook for Today and the Weekend



- A cold front, forecast to stretch east from North Texas to North Georgia, and off the North Carolina coast is forecast to stall by late today.
  - There is a potential for showers both north and south of the front.
    - Mixed precipitation and freezing rain is possible for the Virginia mountains.
- The frontal boundary is forecast to wobble north and south as low pressure develops along it this weekend.
  - This keeps a potential for showers for much of the Southern Area through the weekend.
    - Most areas are forecast to see rain.
    - Virginia may see wintery precipitation.

Watches, Warnings and Advisories as of 8 am This Morning

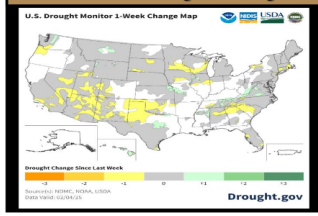
- **Red Flag Warnings/Fire Weather Watch:** The Texas/Oklahoma Panhandles for wind and low RH through 7 pm.
- **Severe Weather Watches/Warnings:** None.
- **Wind Watches/Warnings/Advisories:** None.
- **Winter Weather Advisories/Watches/Warnings:** None.

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

SACC Daily Outlook

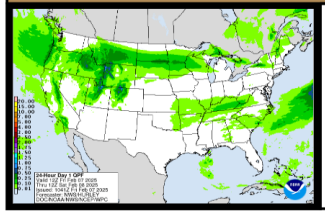
Friday, February 7, 2025

Changes in Drought Conditions from Last Week



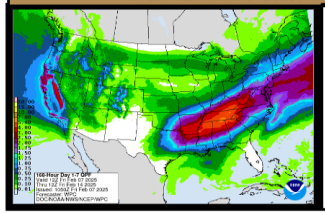
- There has been degradation of drought conditions since last week for several areas (indicated by yellow).
  - The areas with the largest changes in area (not drought type) are:
    - The TX/OK Panhandles
    - OK, SC, North GA, North AL.
    - Portions of the FL Peninsula
- The Appalachians, N TN/S KY, east Central TX, and North MS saw some improvement.

Forecast Rainfall Accumulations for Today



- The Weather Prediction Center is forecasting mostly dry conditions today.
- Some showers are possible across the northern half of the Southern Area, as well AL, GA, and SC.
- The weekend is forecast to keep the potential for showers in the same areas, with the highest potential on Saturday for Kentucky and Virginia.

Total Rainfall Forecast Through Monday Morning



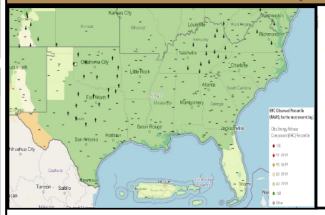
- Several systems are forecast to move across the SA through the week, keeping a potential for showers in the forecast, mainly from the MS Valley east to the Atlantic coast.
- There is a large area with a potential to see significant rain for a large swatch of the area, with 5 to 7 inches possible, mainly for TN, SE KY, N MS/AL/GA, and the Appalachians.

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

SACC Daily Outlook

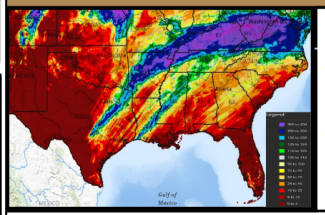
Friday, February 7, 2025

Observed/Forecast ERC



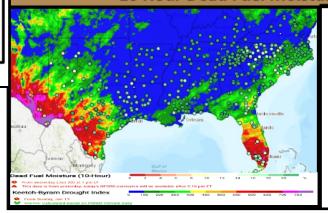
- Most of the Southern Area are reporting ERCs below the 60th percentile.
- The TX/OK Panhandles, the FL Peninsula, and PR are reporting ERCs between the 60th snd 80th percentile.
- The West Texas Mts are reporting the highest ERCs, reporting in at the 93rd peecentile.
- For the next 3 days, ERCs are forecast to (arrows and dashes):
  - ERCs are forecast to remain unchanged for much of the SA.
  - Areas west of the MS Valley are forecast to see increasing trends
  - Area east of the MS Valley are forecast t see decreasing trends.

7-Day Percent of Normal PrecipitationObserved



- Much of the Southern Area has seen less than normal precipitation over the last week.
  - The driest areas continue to be the western half of Texas, Florida, and the east of the Appalachians.
- East Texas, Arkansas, Kentucky, Virginia, and other localized areas did see above normal rainfall.

10 Hour Dead Fuel Moisture with the KBDI(shaded)



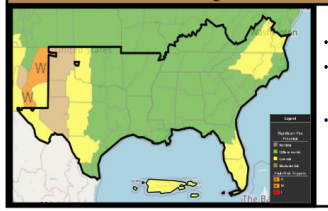
- Most of the Southern Area is reporting 10-hour Fuel Moisture above 20%.
- Florida, south Georgia, and portions of Cnetral and North Texas are reporting 10-hour FM between 15 and 20%.
- The Texas/Oklahoma Panhandles, and West Texas are reporting 10-hour FM below 10%.

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

SACC Daily Outlook

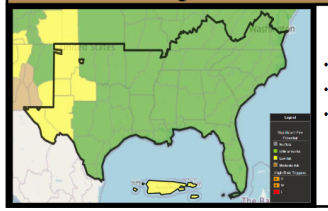
Friday, February 7, 2025

Significant Potential for Today



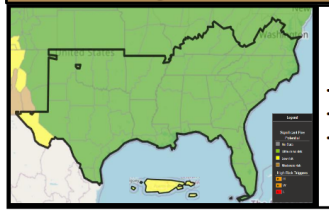
- **High Risk:** None.
- **Moderate Risk:** West Texas and the Texas/Oklahoma Panhandles for dry fuels, low RH and breezy conditions.
- **Low Risk:** West Texas, West Oklahoma, and N Rio Grande Plain, the Florida Peninsula, Central North Carolina, Central and Coastal Virginia, and Puerto Rico for low RH and dry fuels.

Significant Fire Potential for Tomorrow



- **High Risk:** None.
- **Moderate Risk:** None.
- **Low Risk:** West Texas, the Texas/Oklahoma Panhandles, and Puerto Rico low RH and dry fuels.

Significant Fire Potential Outlook for Sunday



- **High Risk:** None.
- **Moderate Risk:** None.
- **Low Risk:** West Texas Mountains and Puerto Rico low RH and dry fuels.

National 7-Day Significant Fire Potential Outlook

Fuels & Fire Danger

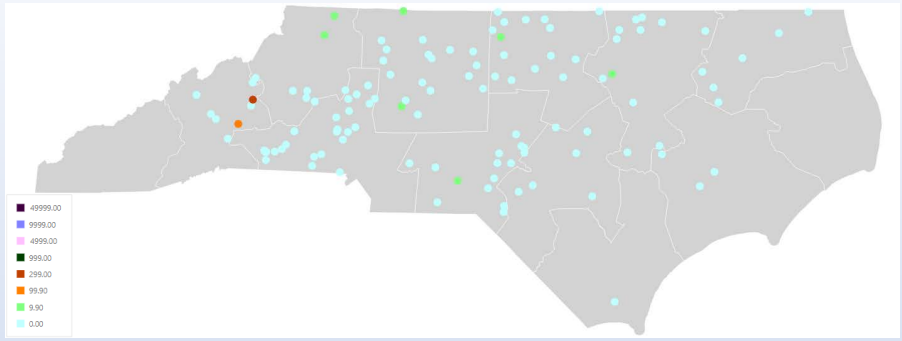
Drought conditions have continued to expanded across the state over the past month (slide #9). January's statewide average ranks as 7th driest out of 131 years of data (see bottom left). The Season Snowfall Accumulation map shows **cumulative** modeled accumulations since 9/30/24, remember that snow to water equivalent is generally 10:1 or higher (see bottom center). Much of the snow may sublimate prior to melting/soaking in, or runoff if shallow soils are still frozen.

Many areas are seeing rainfall deficits of 8"-10" **+** at the 4-month time scale (slide #46). We are seeing hydrological indicators such as reduced stream flow and lower than normal shallow groundwater well levels. Shorter-term, shallow soil and duff moisture has increased somewhat from several rounds of minimal precip, while deeper horizons remain very dry. Be aware of trafficability concerns for engines and non-tracked equipment in these types of conditions. Also, If soaking rains don't occur the deeper dryness will likely become very problematic in the Spring once "Green Up" begins (evaporative demand) and drawdown begins, especially in organic soil areas. See slide #50 for updated NIFC fire potential maps for the next 4 months.

Storm Damage Concerns – Comments received after several of the larger fires this past week in hurricane fuel areas point out that curing of downed tree tops & smaller branches (leaves/needles are still attached) is progressing. This drying has led to further containment challenges due to spotting, along with existing access/trafficability issues. They noted enhanced ember production, heat/lofting and receptivity of adjoining/nearby fuels. Larger down and dead fuels will continue to dry/become available as we move through the year, further enhancing difficulty of control and overall risk.

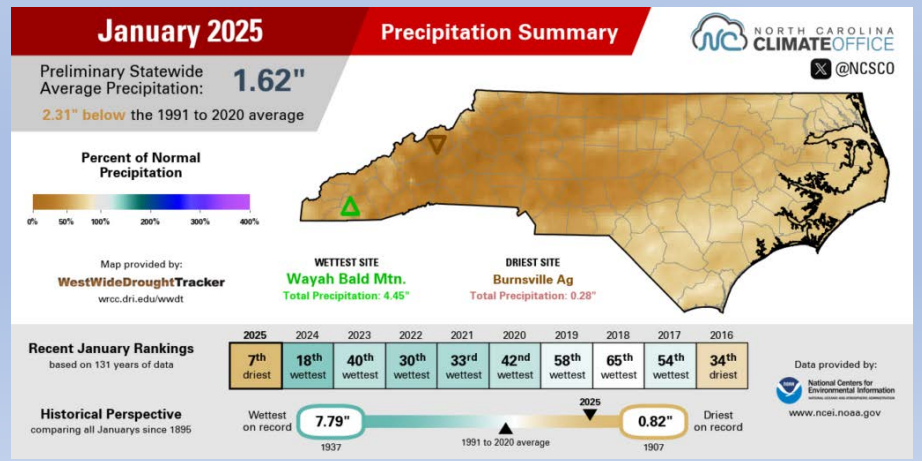
Dormancy - alignment of dormant fuels, warmth, very dry air & wind occurred on 1/29 for most western and central FDRAs (see top right image/table). Consistently poor overnight recovery & lack of wetting rain led to 1's, 10's and 100's to reach near record minimums for the most impacted areas. Continue to be watchful for situations where consecutive days of dry air align with increasing air temps & day length, vegetative dormancy, drought, wind and heavy loading of drying storm debris as we progress towards Spring. Signals pointing to sustained abnormal early season warmth have weakened a bit, with cooler conditions possible in late February/early March, potentially slowing an early green up.

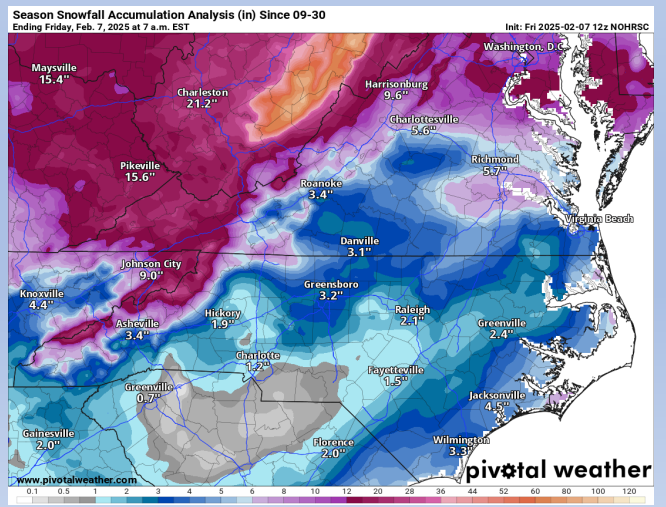
1/29/25 Activity



Largest incidents on Wednesday (1/29/25):
from fiResponse & preliminary reporting only

Incident Name	Discovery Date	Region	District	County	Approx. Acres
North Fork	1/29/2025	Region 3	District 1	McDowell County	644
Crooked Creek	1/29/2025	Region 3	District 1	McDowell County	220
Coleman Creek	1/29/2025	Region 2	District 3	Richmond County	152
Shack	1/29/2025	Region 3	District 2	Wilkes County	76
Waterfront	1/29/2025	Region 2	District 5	Franklin County	35
Briar Patch Fire	1/29/2025	Region 2	District 10	Rowan County	25
Archies Knob Fire	1/29/2025	Region 2	District 10	Stokes County	23
Fender	1/29/2025	Region 3	District 2	Alleghany County	20
Hay	1/29/2025	Region 2	District 11	Caswell County	18





R3/D1/McDowell County - Crooked Creek Fire Image courtesy of Weston Vandenabeele

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

North Carolina Drought Update

Created By: North Carolina Drought Management Advisory Council — www.ncdrought.org | NC Climate Office — climate.ncsu.edu | NC State — @NCSCO

For the assessment period ending **Feb. 4, 2025**

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

The Main Takeaway

Moderate (D1) and Severe (D2) Drought have expanded further across western North Carolina, which has been the driest region of the state over the past month.

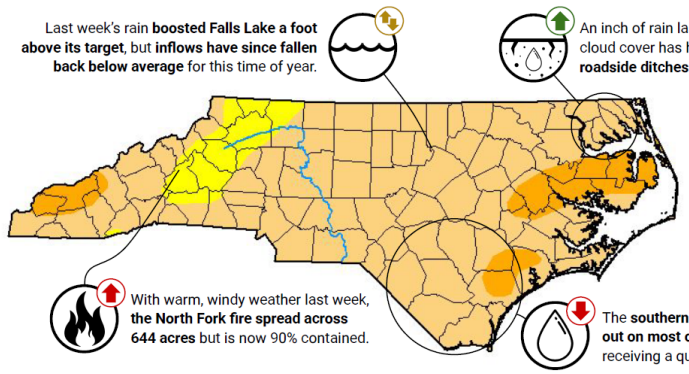
This Week's Summary

The driest conditions have shifted from east to west in recent weeks, with much of the Mountains seeing one of their top ten driest Januarys on record. That has allowed drought to develop further there. In the east, conditions continue to mostly hold steady, with last month's snow keeping topsoils moist while deeper soils and groundwater levels remain below average.

This Winter's Deficits

Since December 1, much of the state is 2 to 4 inches below its normal precipitation, including 2.46 inches in **Asheville** and 3.11 inches in **Raleigh** and **Fayetteville**.

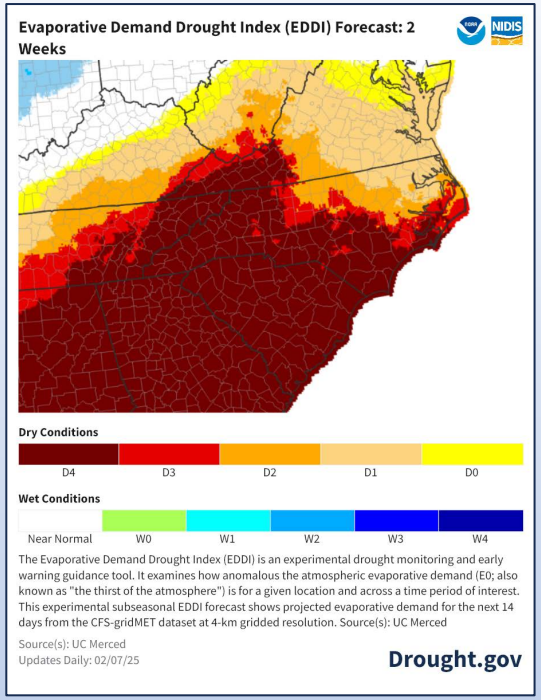
For your local drought status, visit **www.ncdrought.org**

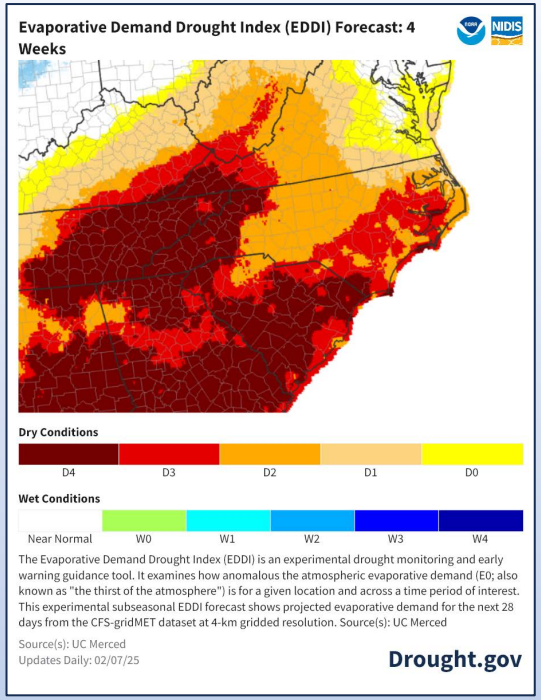


Last Week's Drought Status

Statewide Coverage by Category

Category	Current Coverage	Change Since Last Week
D0: Abnormally Dry	7.94%	-5.74%
D1: Moderate Drought	81.38%	+3.64%
D2: Severe Drought	10.67%	+2.29%
D3: Extreme Drought	0.00%	0.00%
D4: Exceptional Drought	0.00%	0.00%



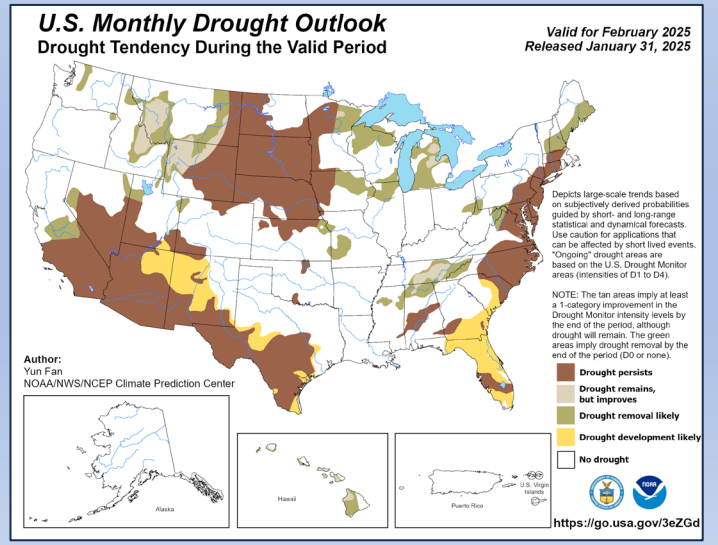


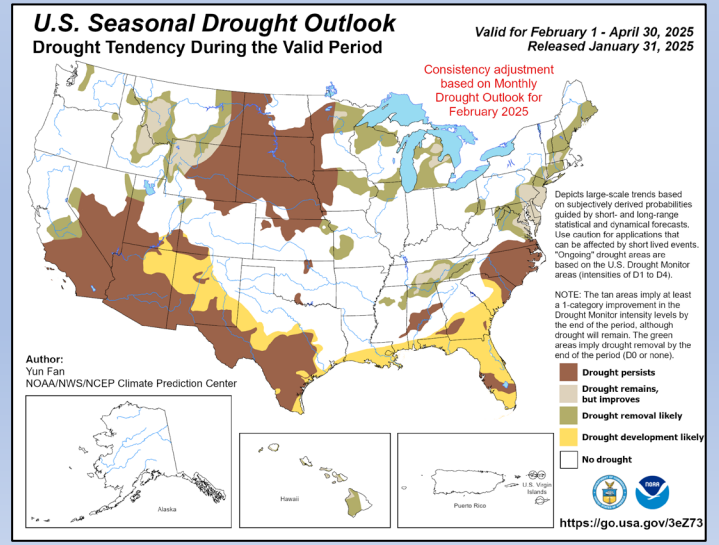
EDDI & Drought

EDDI Maps - The EDDI maps at the top right illustrate modeled evaporative demand at the two-week and four-week level. They represent influence of warmer conditions and higher evaporative demand expected over the next several weeks, as compared to last month.

US Drought Monitor – USDM map released last week, note addition of D2 conditions in SW Mountains last week (top left).

US Monthly & Seasonal Drought Outlook - released on 1/31/25, shown at right. Note that western mountain areas are now favoring drought reduction, at least for the short-term. See detailed state/regional discussions here. *All of this is dependent upon any future storm tracks and/or any La Nina associated impacts.*





Daily WIMS Observations and NFDRS Estimates

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

- The averaged values are derived from the SIG Station Outputs for a particular FDRA
  (SIG station names shown in bold on the live link above)
- You can toggle the percentiles on/off, displaying below the actual calculated values
  percentiles are based on SIG station averages from analysis of "All Days" for entire calendar year range through 2021
- Herb & Woody Fuel Moisture Estimates derived from SIG Station Averages – based on Station GSI Settings within WIMS, not live fuel moisture sampling. Actual green-up is variable across the landscape.

Daily WIMS Forecast Observations and NFDRS Estimates are also available

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

2/7/25 Observations

Averages by FDRA

FDRA	STATION_COUNT	NFDR_DATE	BI	ERC	IC	SC	KBDI	1HR	10HR	100HR	1000HR	HRB	WOODY	TEMP	RH	WIND	PRECIP	DUR
Southern Highlands	3	2025-02-07	51.73 71.3%	21.70 68.8%	2.70 51.9%	24.17 70.0%	15.67	19.95 75.0%	23.71 81.7%	19.56 59.7%	24.06 93.9%	30.00	50.00	56.3°F	74.0%	ESE 1.7 mph	0.41 in.	7.0
Central Mountains	3	2025-02-07	87.33 80.5%	39.57 82.5%	6.80 81.4%	39.83 81.0%	96.33	13.53 54.7%	22.89 79.2%	18.39 34.3%	21.24 68.1%	30.00	50.00	62.0°F	46.0%	S 3.3 mph	0.25 in.	2.0
Northern Highlands	2	2025-02-07	114.50 88.9%	45.20 87.2%	16.40 96.2%	61.30 88.9%	25.00	9.73 10.2%	21.25 68.3%	17.78 35.9%	21.65 80.1%	50.00	80.00	59.5°F	27.0%	WSW 8.5 mph	0.40 in.	3.5
Blue Ridge Escarpment	3	2025-02-07	108.03 84.3%	58.63 94.9%	16.20 92.7%	40.93 75.9%	53.00	8.97 14.7%	18.43 53.7%	17.27 23.5%	17.62 20.5%	30.00	56.67	68.0°F	21.7%	SSW 3.0 mph	0.08 in.	2.0
Western Piedmont	3	2025-02-07	101.10 82.4%	55.03 89.0%	13.93 88.8%	39.03 78.9%	47.67	9.91 29.8%	21.11 78.2%	18.11 49.4%	21.15 76.6%	30.00	50.00	69.3°F	25.0%	W 4.3 mph	0.05 in.	1.3
Sandhills	3	2025-02-07	49.13 83.5%	33.90 38.9%	8.10 49.8%	15.43 98.5%	176.33	11.87 56.8%	22.20 81.1%	19.88 68.3%	21.62 86.8%	36.67	63.33	72.7°F	35.0%	NW 4.7 mph	0.02 in.	0.7
Eastern Piedmont	4	2025-02-07	118.60 83.5%	48.83 65.6%	14.20 82.6%	61.05 85.0%	100.00	10.73 39.1%	21.07 77.1%	19.03 55.5%	20.77 78.3%	30.00	60.00	68.8°F	24.8%	NW 8.8 mph	0.08 in.	1.0
Southern Coastal	7	2025-02-07	57.79 47.9%	31.36 48.4%	4.97 44.6%	20.66 47.1%	396.71	13.81 63.2%	20.93 76.0%	20.73 71.9%	23.16 88.7%	50.00	90.00	76.4°F	44.3%	SSW 3.3 mph	0.00 in.	0.3
Northern Coastal	4	2025-02-07	77.25 58.5%	35.10 52.0%	8.78 67.0%	33.78 63.3%	293.50	12.33 48.6%	21.43 77.4%	21.00 75.2%	22.49 81.5%	50.00	90.00	74.3°F	25.8%	WNW 7.0 mph	0.10 in.	1.5

Note cumulative impact of longer duration dry air, most significantly on the 100-hr dead fuels in the mtn FDRAs. They continue to rebound from last week's lows.

Important notes for next slide group:

A. Current ERC, KBDI, BI, 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, note that 2025 data is shown as Magenta Dash-Dot while 2024 is shown in Green. With only a few day of data for CY25 it is hard to discern on some of the graphs.

B. Weekly Outlook - FDRA General Fire Danger Forecast Matrix:

- Available on the FWIP within the "Resources for NCFS" page.
- The operation link is: https://products.climate.ncsu.edu/fwip/outlook.php
- The matrix updates daily - please review the tool notes below for more details.

Tool Summary:

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

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

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

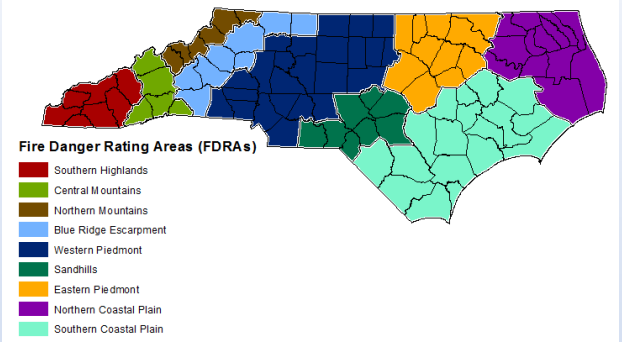
- Low to Moderate (0 to 74th percentile); shown in blue-green
- High (75th to 89th percentile); shown in yellow
- Very High to Extreme (90th+ percentile); shown in red and labeled as Critical

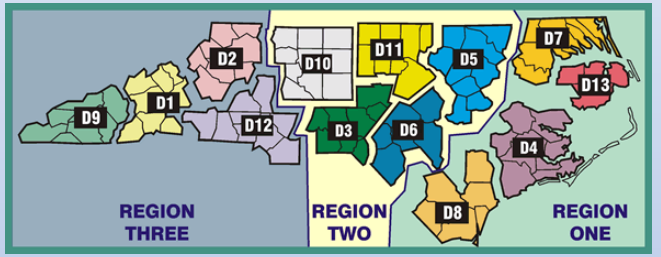
Dead fuel moisture forecast values are grouped into three categories based on historical percentiles, assessed using the FF+ All Days filter through 2021:

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

Other Notes:

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



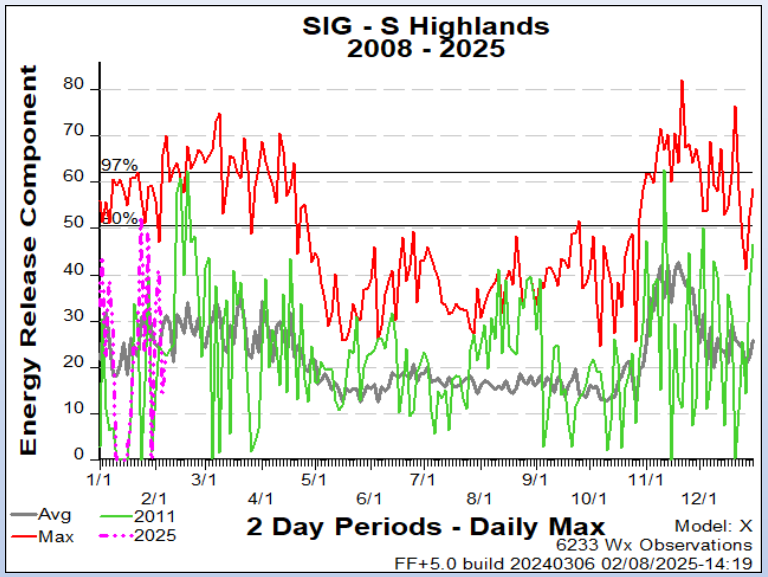


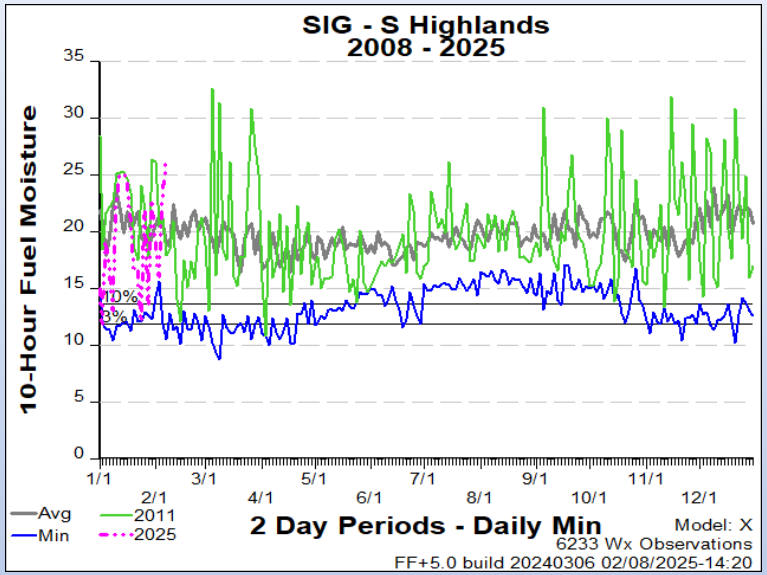
To reduce duplication & increase situational awareness, slides 11-34 are organized by FDRA in this order:

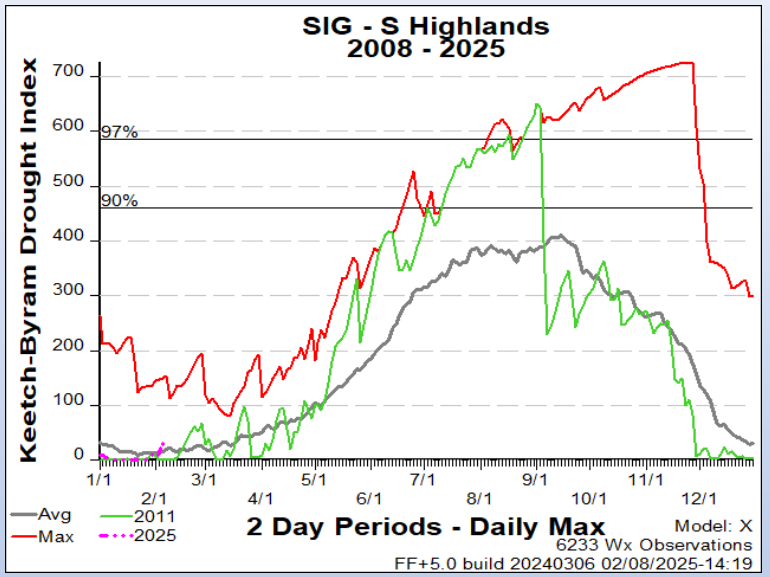
**(R3 = Region 3, R2 = Region 2, R1 = Region 1)*

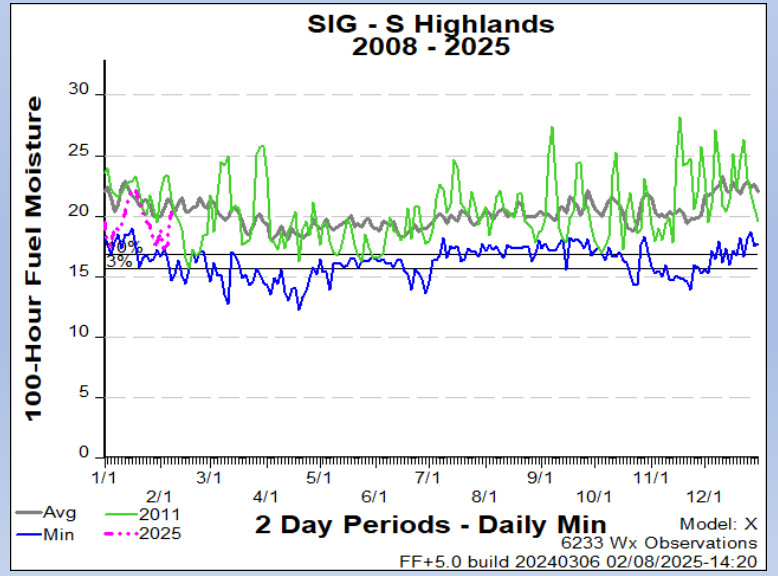
- Southern Highlands (R3)
- Central Mountains (R3)
- Northern Highlands (R3)
- Blue Ridge Escarpment (R2 & R3)
- Western Piedmont (R2 & R3)
- Eastern Piedmont (R2)
- Sandhills (R2)
- North Coast (R1)
- South Coast (R1 & R2)

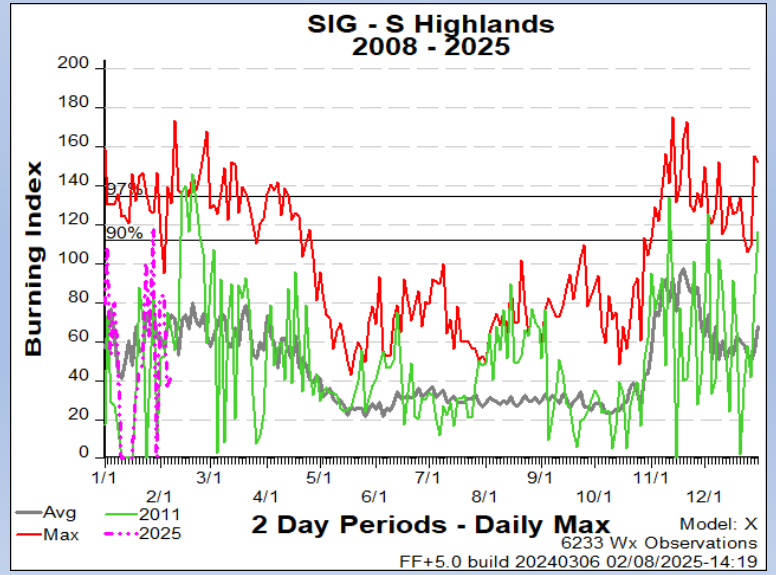
FDRA – Southern Highlands

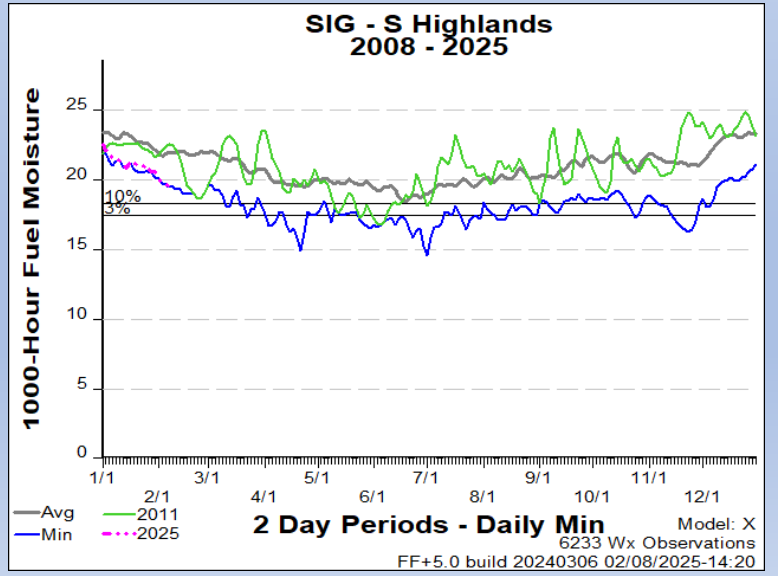






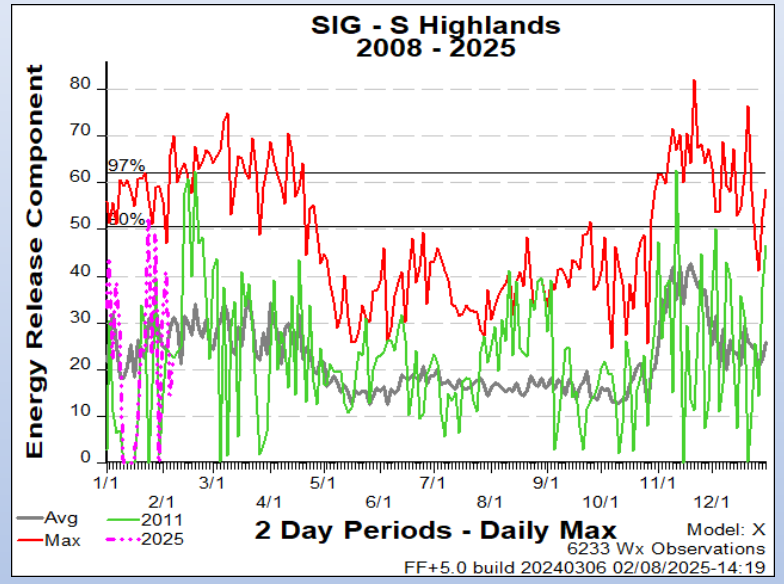




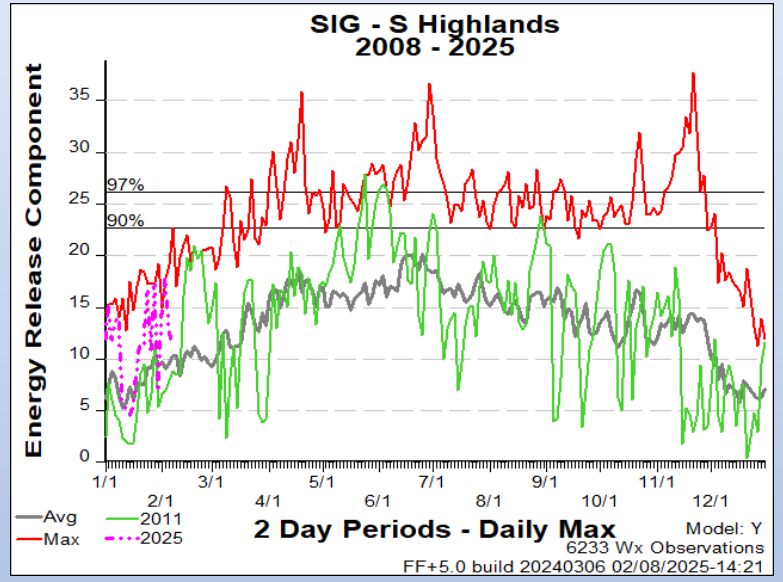


FDRA – Southern Highlands

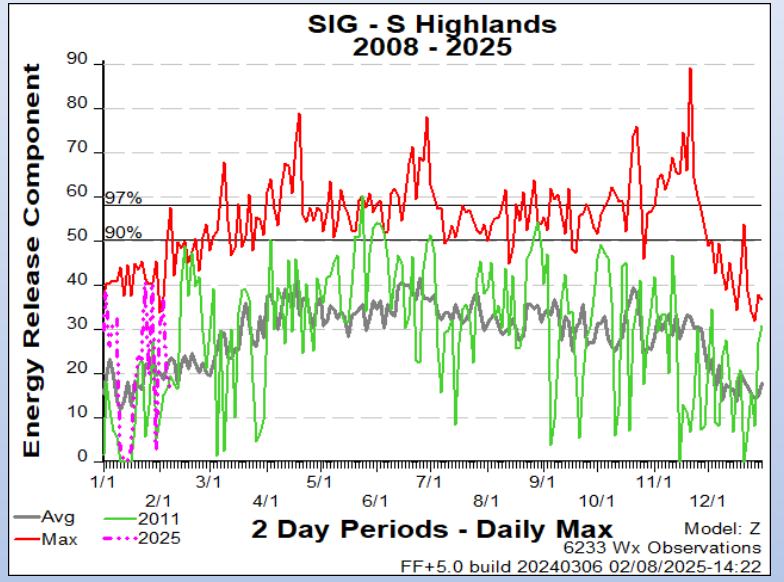
ERC-X



ERC-Y



ERC-Z



Comparison of ERC by NFDRS Fuel Model

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

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

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

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

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	SAT 08-Feb	SUN 09-Feb	MON 10-Feb	TUE 11-Feb	WED 12-Feb	THU 13-Feb	FRI 14-Feb
Avg. Max. Temp. (°F)	62	61	50	47	53	49	50
Avg. Min. Humidity (%)	75	52	71	84	82	60	48
Avg. 20' Wind Speed (mph)	7	6	2	5	4	8	5
Avg. Wind Direction*	SW	WNW	SW	SE	SE	W	S
Avg. Probability of Precip. (%)	69	32	78	93	88	43	14
Days Since a Wetting Rain**	1.3	2.0	3.0	4.0			
Forecast ERC (Fuel Model X)	20.1	29.0	26.1	8.2	1.6	8.1	34.5
Forecast BI (Fuel Model X)	70.0	82.4	68.5	34.0	7.2	42.1	93.3
Forecast IC (Fuel Model X)	2.5	3.4	2.1	0.6	0.1	0.9	3.5
Forecast 100-Hr. FMC	22.2	22.8	22.9	23.3	24.4	25.8	26.1
Forecast 1000-Hr. FMC	24.2	24.0	24.0	24.1	24.2	24.2	24.2
KBDI	15.7						

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

Data Source:

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

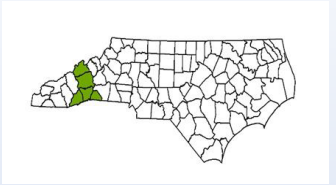
Values in the table above are averages from 3 stations in this FDRA:

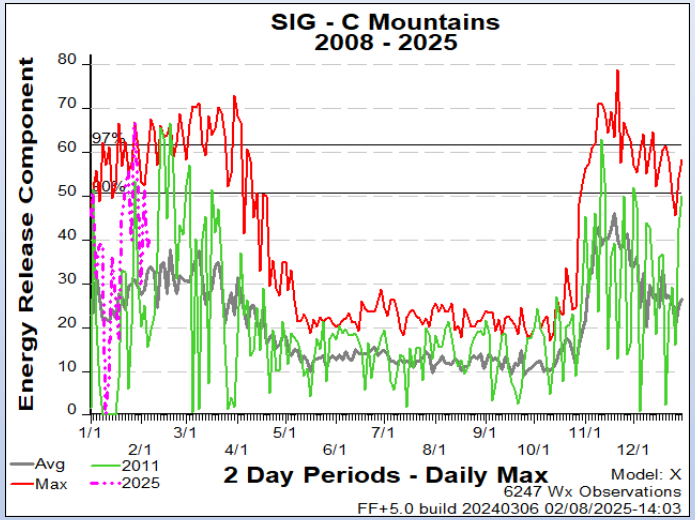
- **Tusquitee** (315602)
- **Locust Gap** (315802)
- **Highlands** (315803)

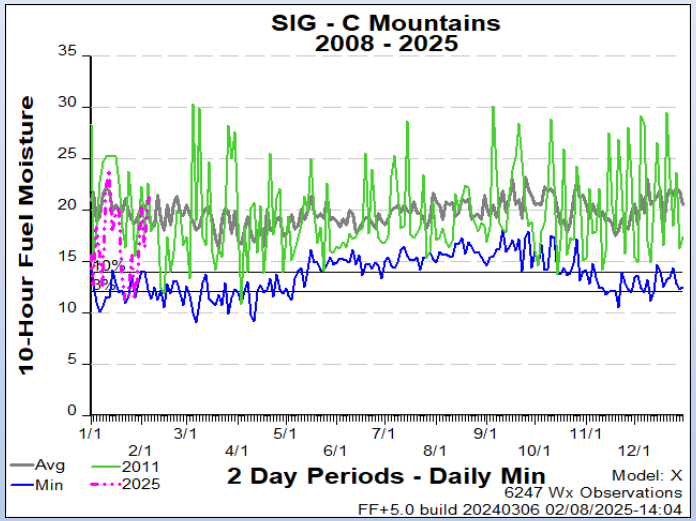
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 55°F	Greater than 55°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 5 mph	Between 5 mph and 7 mph	Greater than 7 mph
Avg. Wind Direction*	Criticality of wind direction is highly dependent on burn operations and/or structures threatened.		
Days Since a Wetting Rain**	A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted above.		
Energy Release Comp.	Less than 40	Between 40 and 52	Greater than 52
Burning Index	Less than 95	Between 95 and 118	Greater than 118
Ignition Component	Less than 9	Between 9 and 14	Greater than 14
100-Hour Fuel Moisture	Greater than 18%	Between 17% and 18%	Less than 17%
1000-Hour Fuel Moisture	Greater than 19%	Between 18% and 19%	Less than 18%
KBDI	Less than 345	Between 345 and 479	Greater than 479

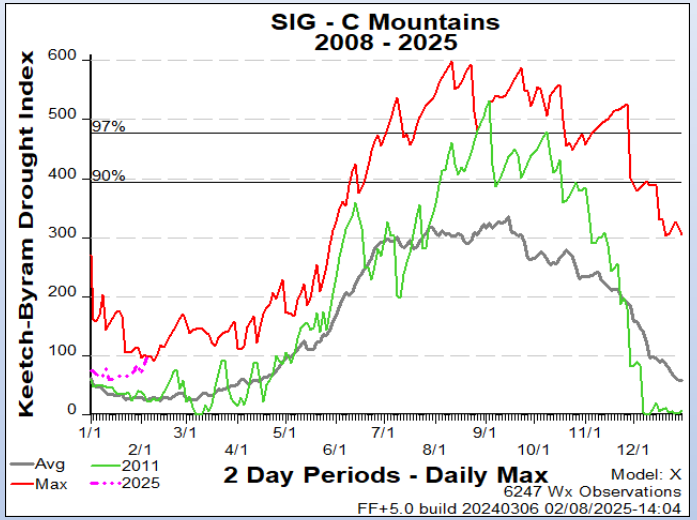
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

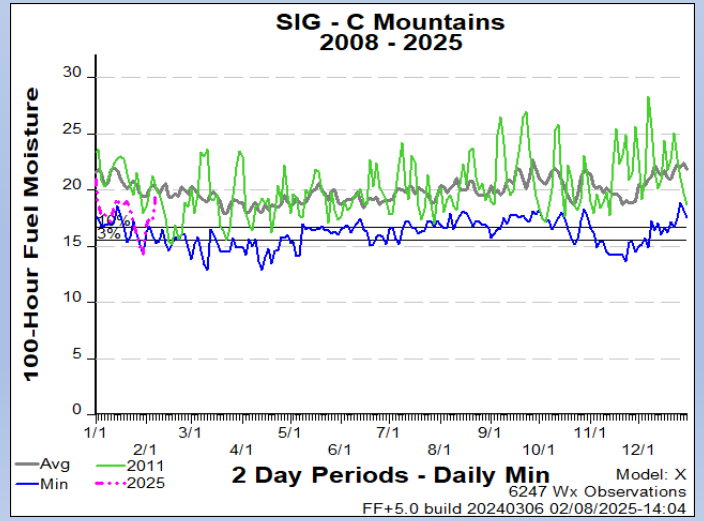
FDRA – Central Mountains

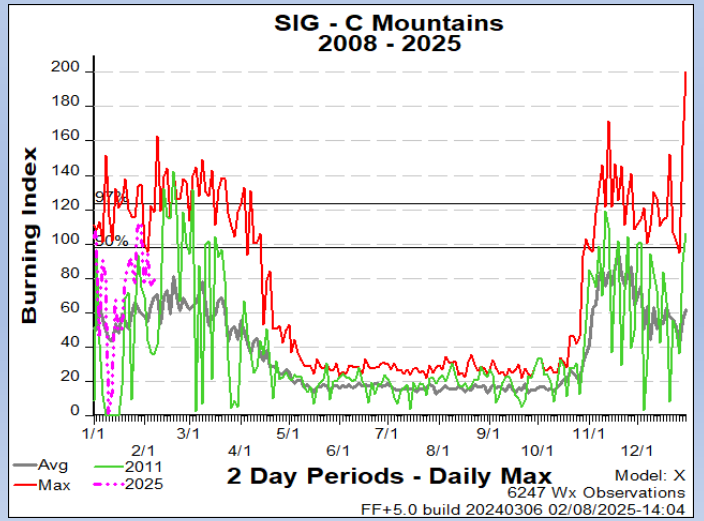


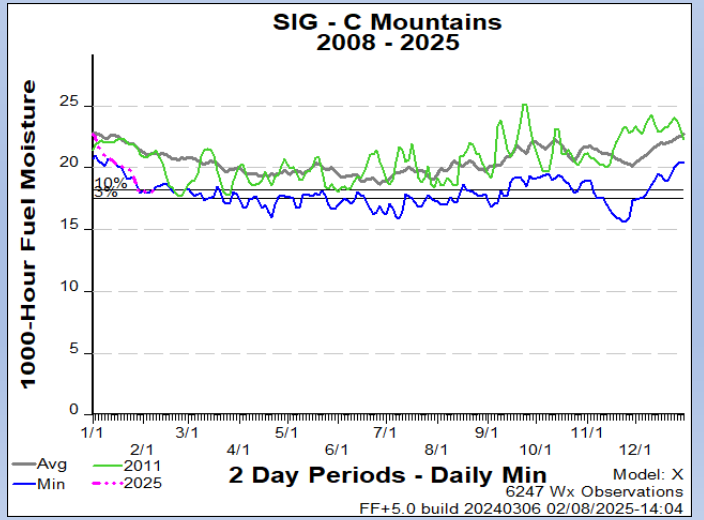




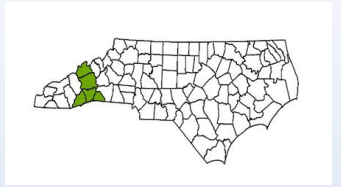




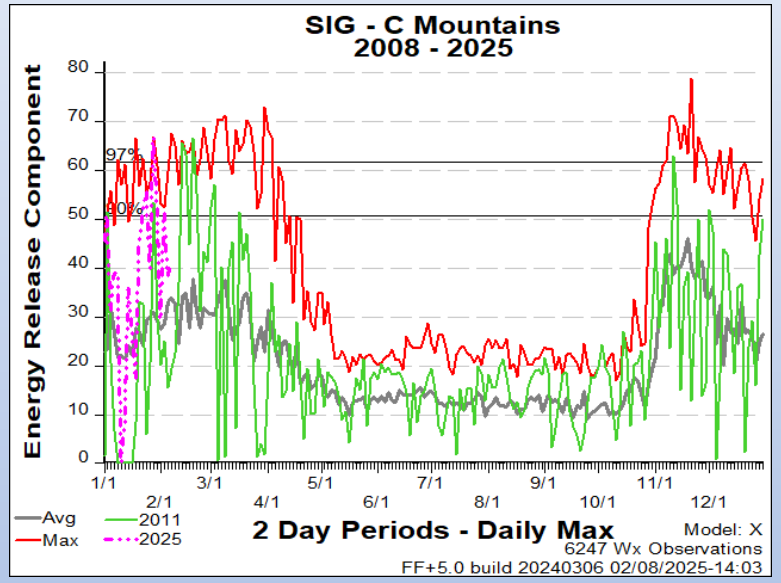




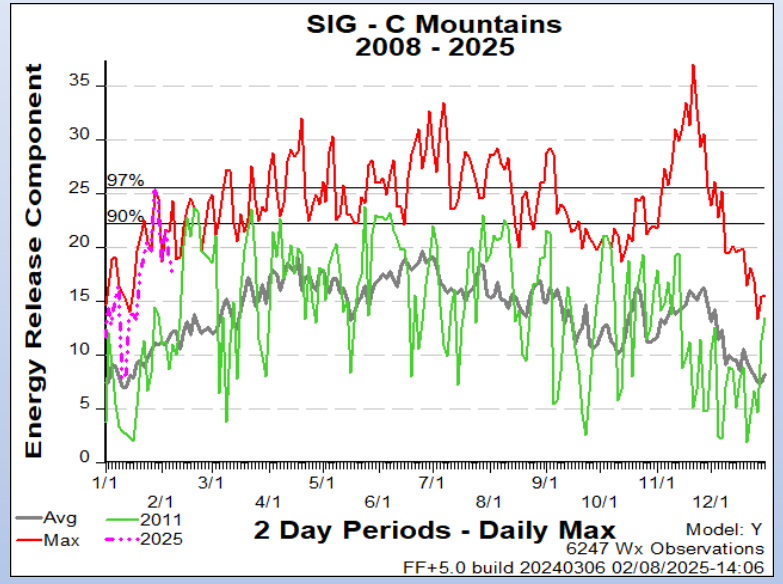
FDRA – Central Mountains



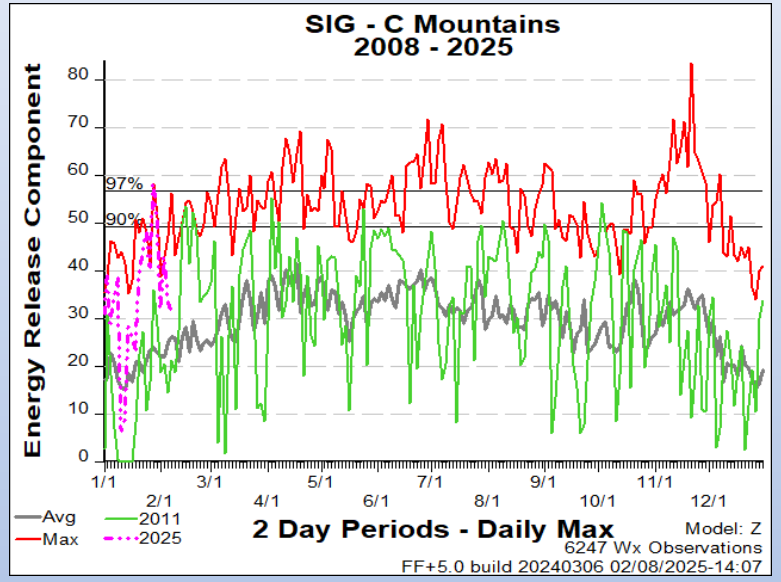
ERC-X



ERC-Y



ERC-Z



Comparison of ERC by NFDRS Fuel Model

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

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

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

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

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	SAT 08-Feb	SUN 09-Feb	MON 10-Feb	TUE 11-Feb	WED 12-Feb	THU 13-Feb	FRI 14-Feb
Avg. Max. Temp. (°F)	65	65	50	48	55	55	53
Avg. Min. Humidity (%)	67	44	63	75	73	53	44
Avg. 20' Wind Speed (mph)	6	7	5	4	3	7	4
Avg. Wind Direction*	S	WNW	ESE	SSE	SSE	W	SW
Avg. Probability of Precip. (%)	49	40	74	91	87	47	13
Days Since a Wetting Rain**	4.0	5.0	6.0	1.3			
Forecast ERC (Fuel Model X)	43.1	41.1	37.0	19.4	0.2	14.7	40.8
Forecast BI (Fuel Model X)	105.9	114.0	88.4	57.2	2.0	57.1	96.3
Forecast IC (Fuel Model X)	6.6	6.3	3.4	1.6	0.0	1.6	4.3
Forecast 100-Hr. FMC	18.8	18.7	18.7	18.9	20.1	23.3	23.7
Forecast 1000-Hr. FMC	20.9	20.9	20.8	20.9	21.1	21.1	21.1
KBDI	96.3						

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

Data Source:

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

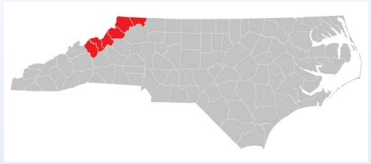
Values in the table above are averages from 3 stations in this FDRA:

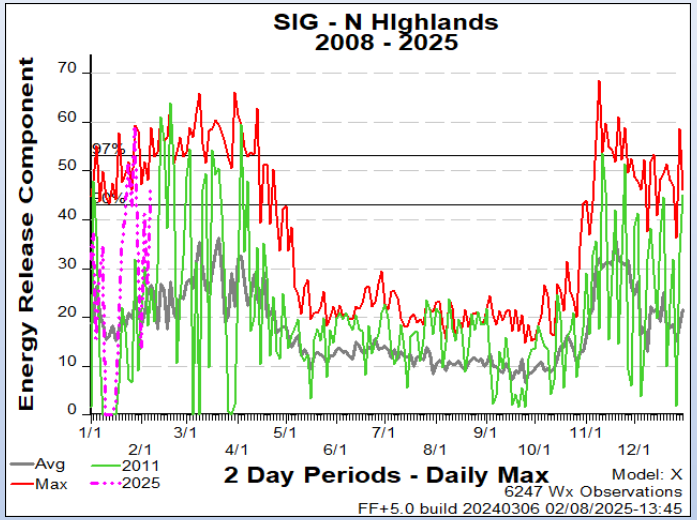
- **7 Mile Ridge** (313302)
- **Davidson River** (316001)
- **Mtn Horticultural Crops Res Stn** (316141)

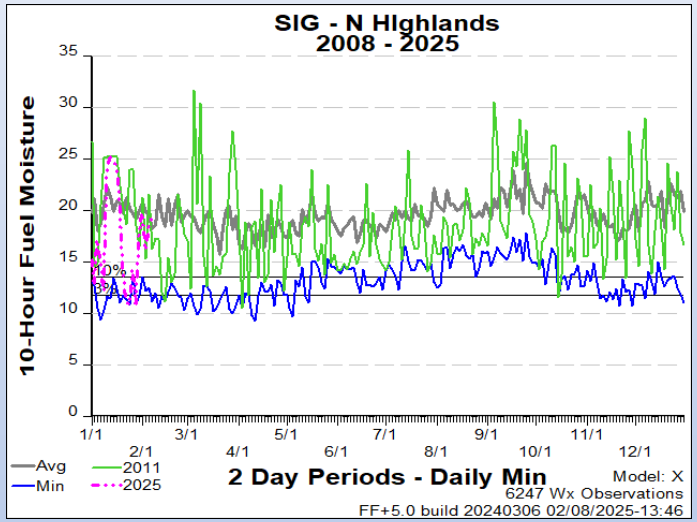
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 5 mph	Between 5 mph and 10 mph	Greater than 10 mph
Avg. Wind Direction*	Criticality of wind direction is highly dependent on burn operations and/or structures threatened.		
Days Since a Wetting Rain**	A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted above.		
Energy Release Comp.	Less than 33	Between 33 and 50	Greater than 50
Burning Index	Less than 78	Between 78 and 106	Greater than 106
Ignition Component	Less than 6	Between 6 and 11	Greater than 11
100-Hour Fuel Moisture	Greater than 19%	Between 17% and 19%	Less than 17%
1000-Hour Fuel Moisture	Greater than 20%	Between 19% and 20%	Less than 19%
KBDI	Less than 319	Between 319 and 417	Greater than 417

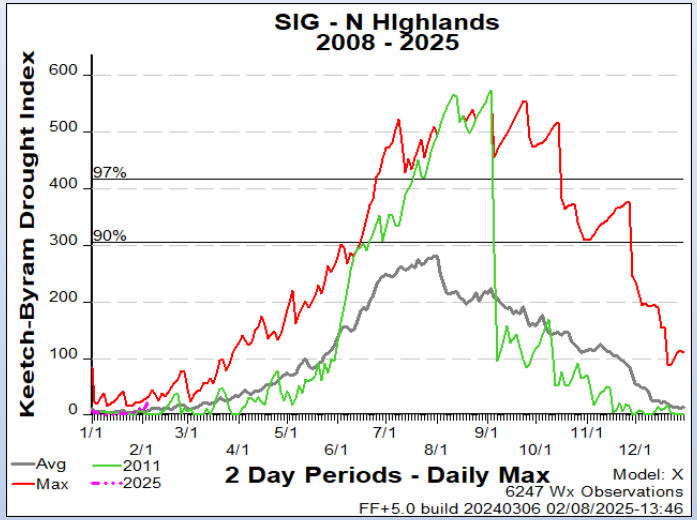
Other factors to consider when determining fire danger: **sky conditions, precipitation amount, number of days since rain,** and **season**

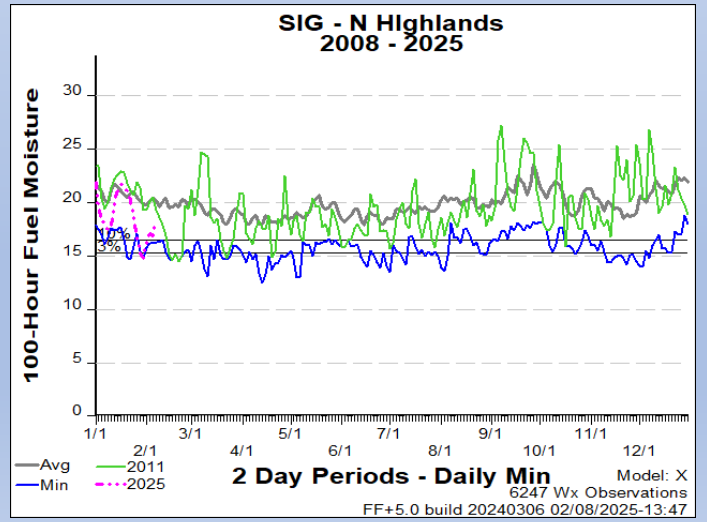
FDRA – Northern Highlands

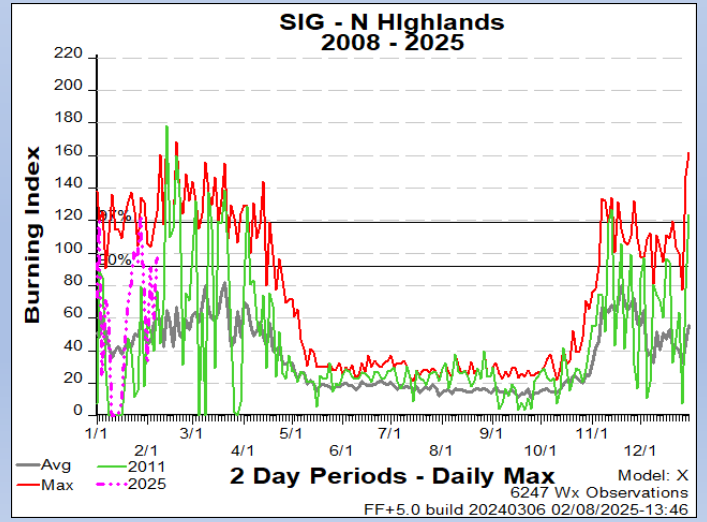


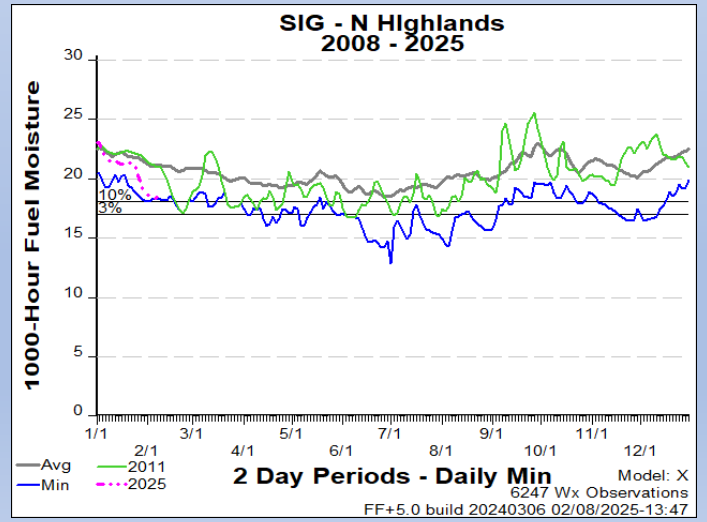




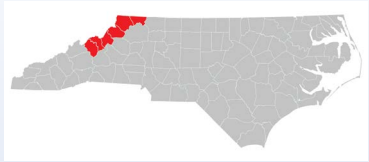




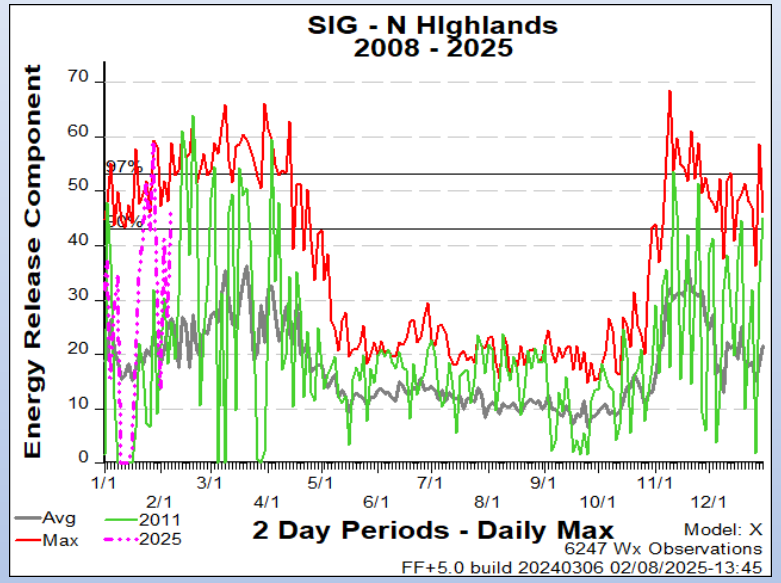




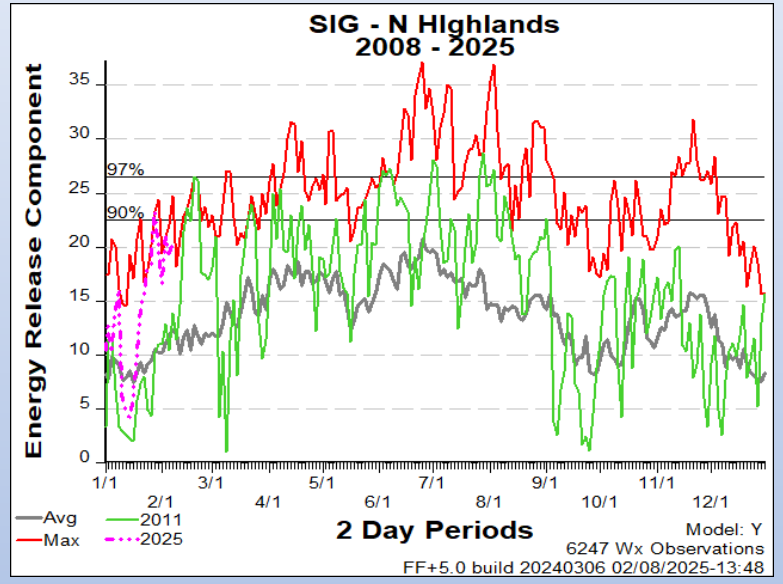
FDRA – Northern Highlands



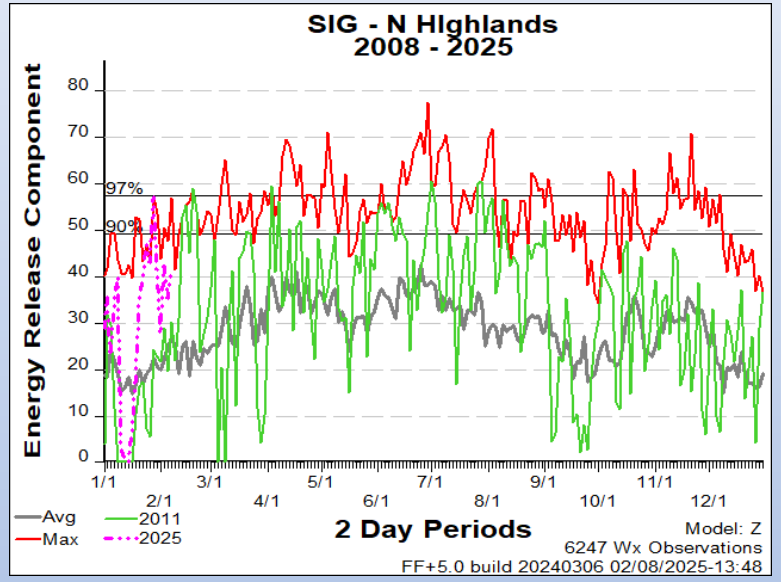
ERC-X



ERC-Y



ERC-Z



Comparison of ERC by NFDRS Fuel Model

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

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

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

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

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	SAT 08-Feb	SUN 09-Feb	MON 10-Feb	TUE 11-Feb	WED 12-Feb	THU 13-Feb	FRI 14-Feb
Avg. Max. Temp. (°F)	53	57	43	39	46	49	46
Avg. Min. Humidity (%)	64	42	64	85	83	67	56
Avg. 20' Wind Speed (mph)	6	10	3	5	4	9	6
Avg. Wind Direction*	SSW	WNW	E	SE	SE	W	WSW
Avg. Probability of Precip. (%)	46	44	71	95	84	53	14
Days Since a Wetting Rain**	1.3	1.3	2.3	0.0			
Forecast ERC (Fuel Model X)	35.3	30.4	29.6	12.1	0.1	3.7	26.1
Forecast BI (Fuel Model X)	89.1	87.9	70.3	38.3	1.7	15.2	69.8
Forecast IC (Fuel Model X)	6.0	6.0	3.3	1.2	0.0	0.5	3.7
Forecast 100-Hr. FMC	18.6	18.7	18.7	18.8	19.4	22.9	23.5
Forecast 1000-Hr. FMC	21.5	21.4	21.4	21.5	21.7	21.8	21.7
KBDI	25.0						

Data Source:

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

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

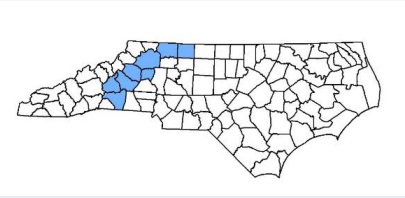
- **Laurel Springs** (310101)
- **Upper Mountain Research Stn** (310141)
- **Busick** (313402)

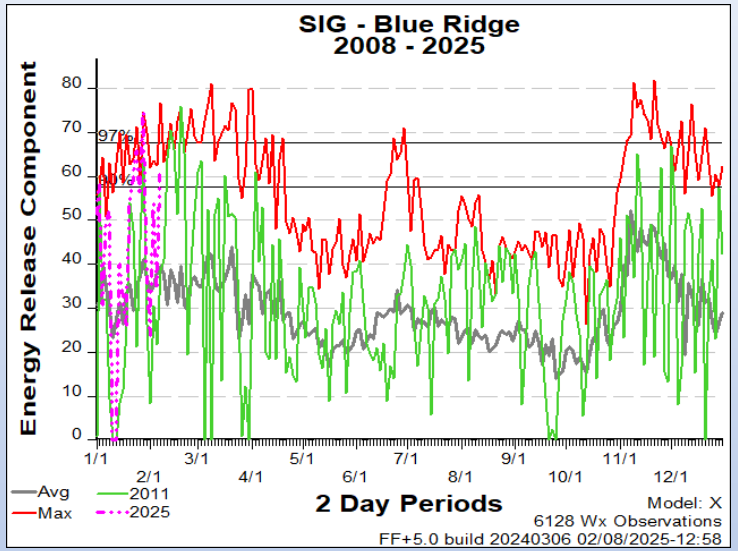
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 58°F	Greater than 58°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 2 mph	Between 2 mph and 5 mph	Greater than 5 mph
Avg. Wind Direction*	Criticality of wind direction is highly dependent on burn operations and/or structures threatened.		
Days Since a Wetting Rain**	A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted above.		
Energy Release Comp.	Less than 26	Between 26 and 46	Greater than 46
Burning Index	Less than 67	Between 67 and 108	Greater than 108
Ignition Component	Less than 5	Between 5 and 9	Greater than 9
100-Hour Fuel Moisture	Greater than 18%	Between 17% and 18%	Less than 17%
1000-Hour Fuel Moisture	Greater than 20%	Between 19% and 20%	Less than 19%
KBDI	Less than 192	Between 192 and 330	Greater than 330

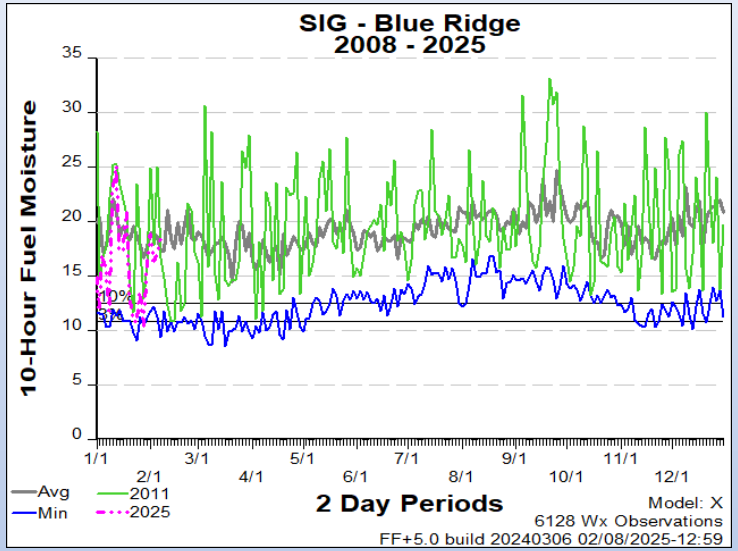
Other factors to consider when determining fire danger: **sky conditions, precipitation amount, number of days since rain,** and **season**

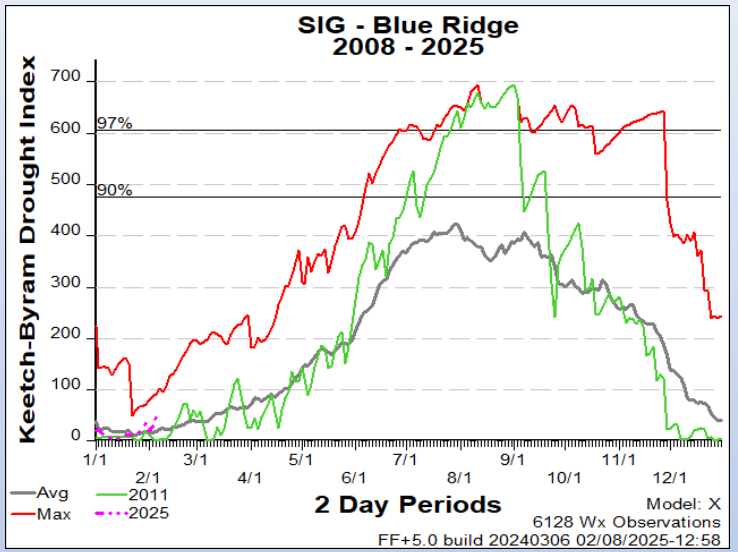
0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

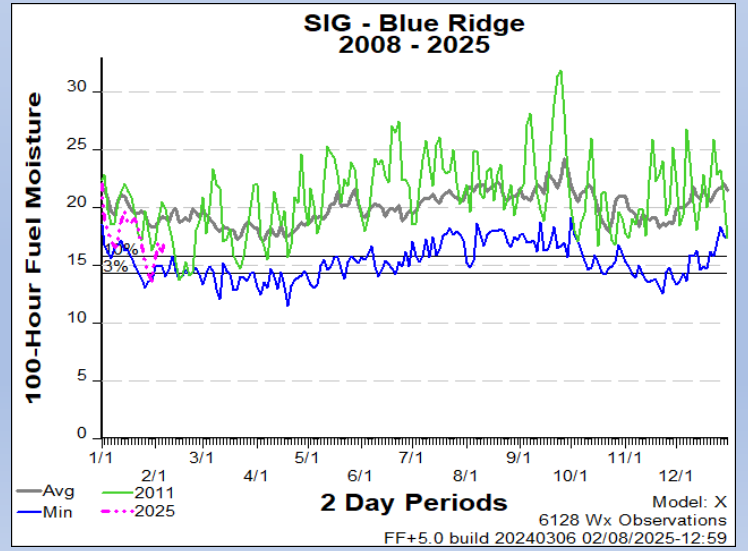
FDRA – Blue Ridge Escarpment

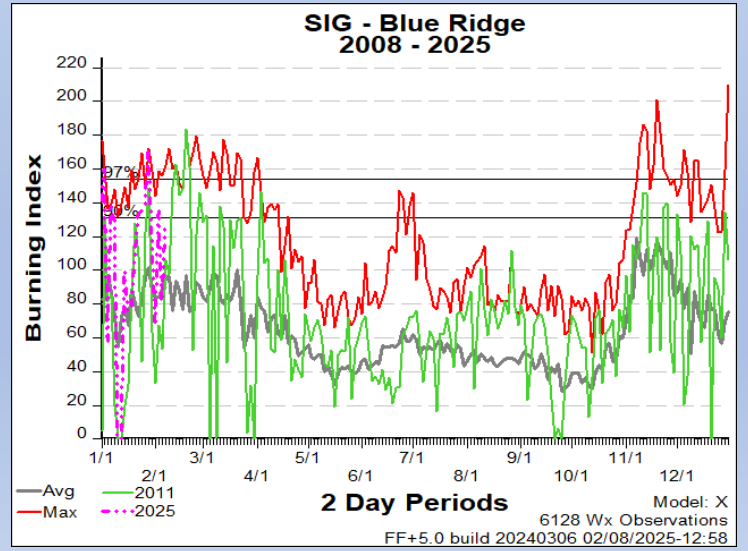


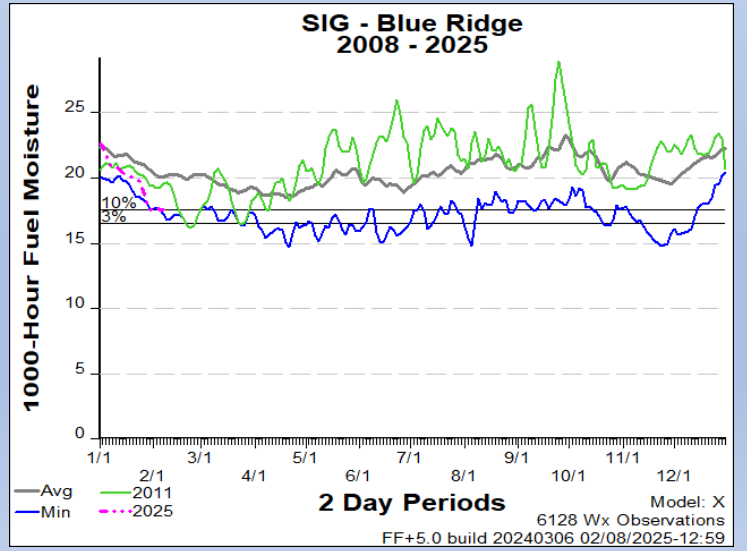




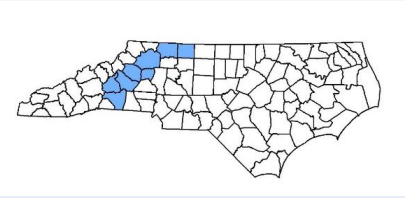




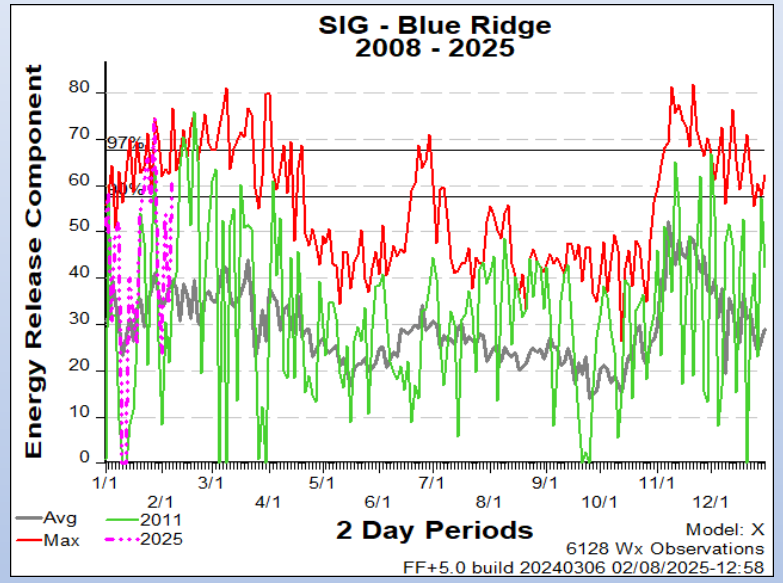




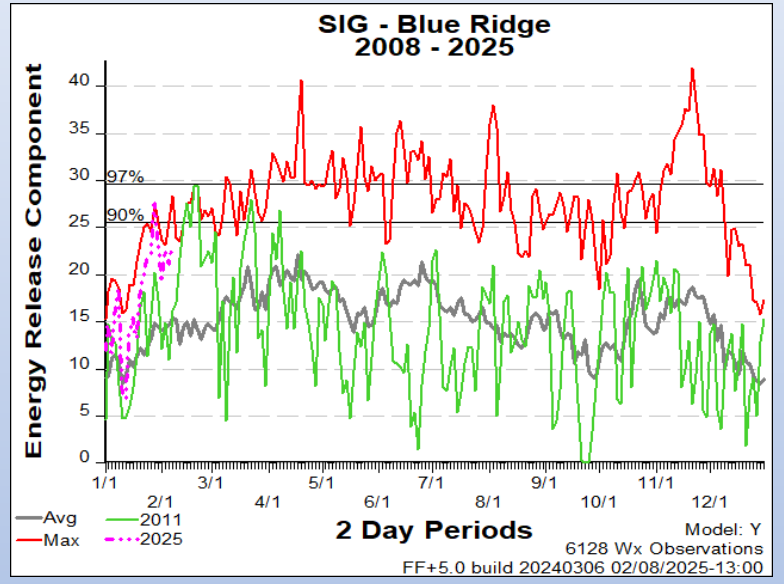
FDRA – Blue Ridge Escarpment



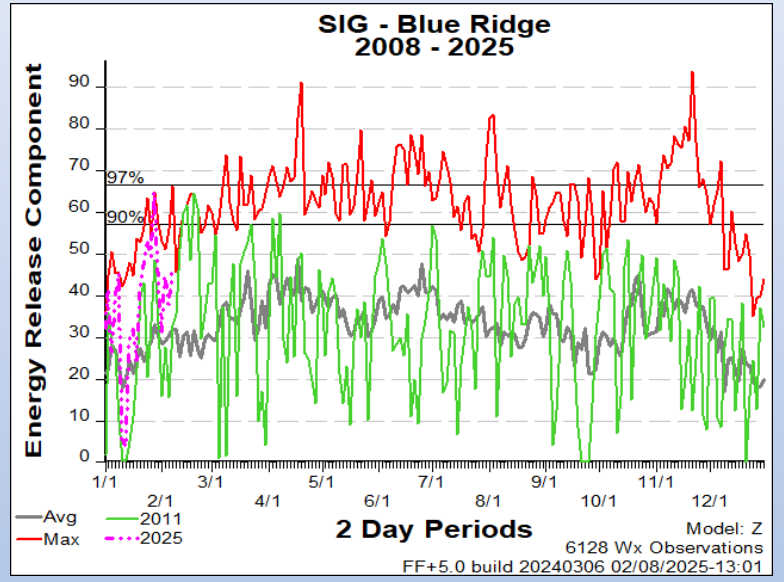
ERC-X



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 2024 are displayed along with Year-to-Date 2025

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	SAT 08-Feb	SUN 09-Feb	MON 10-Feb	TUE 11-Feb	WED 12-Feb	THU 13-Feb	FRI 14-Feb
Avg. Max. Temp. (°F)	55	62	46	39	47	50	48
Avg. Min. Humidity (%)	58	36	61	79	74	57	48
Avg. 20' Wind Speed (mph)	4	7	2	3	3	7	4
Avg. Wind Direction*	S	WNW	ENE	ESE	E	WSW	SW
Avg. Probability of Precip. (%)	34	42	67	92	85	51	13
Days Since a Wetting Rain**	6.7	7.7	8.7	5.7			
Forecast ERC (Fuel Model X)	55.2	41.8	45.5	26.0	0.8	15.4	42.3
Forecast BI (Fuel Model X)	91.8	93.2	85.3	62.8	4.3	52.3	84.9
Forecast IC (Fuel Model X)	7.9	6.3	4.9	1.8	0.0	1.9	4.5
Forecast 100-Hr. FMC	17.0	17.0	17.4	17.8	20.2	24.9	24.8
Forecast 1000-Hr. FMC	17.9	18.0	18.0	18.0	18.1	18.8	19.9
KBDI	53.0						

Data Source:

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

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

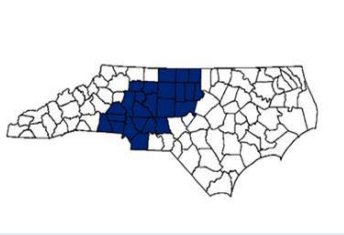
- **Rendezvous Mtn.** (312001)
- **North Cove Pinnacle (fr1)** (314301)
- **Rutherford County** (316302)

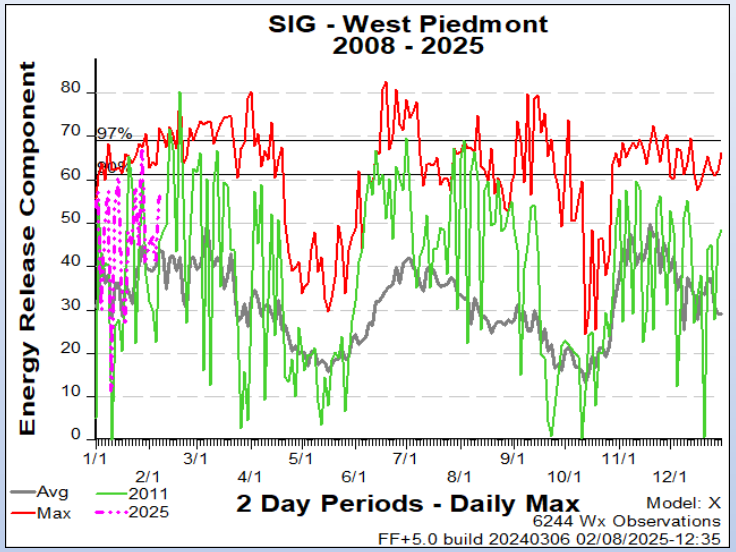
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 40°F	Between 40°F and 50°F	Greater than 50°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 2 mph	Between 2 mph and 4 mph	Greater than 4 mph
Avg. Wind Direction*	Criticality of wind direction is highly dependent on burn operations and/or structures threatened.		
Days Since a Wetting Rain**	A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted above.		
Energy Release Comp.	Less than 52	Between 52 and 62	Greater than 62
Burning Index	Less than 116	Between 116 and 136	Greater than 136
Ignition Component	Less than 14	Between 14 and 20	Greater than 20
100-Hour Fuel Moisture	Greater than 18%	Between 16% and 18%	Less than 16%
1000-Hour Fuel Moisture	Greater than 19%	Between 18% and 19%	Less than 18%
KBDI	Less than 351	Between 351 and 508	Greater than 508

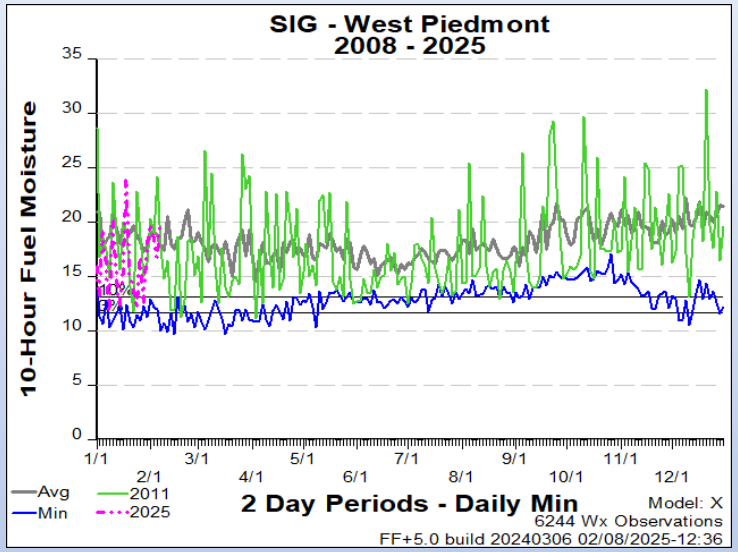
Other factors to consider when determining fire danger: **sky conditions, precipitation amount, number of days since rain,** and **season**

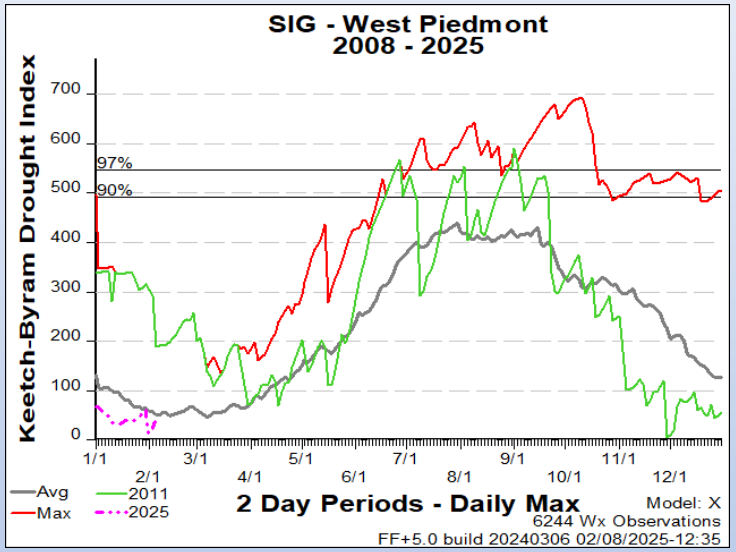
0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

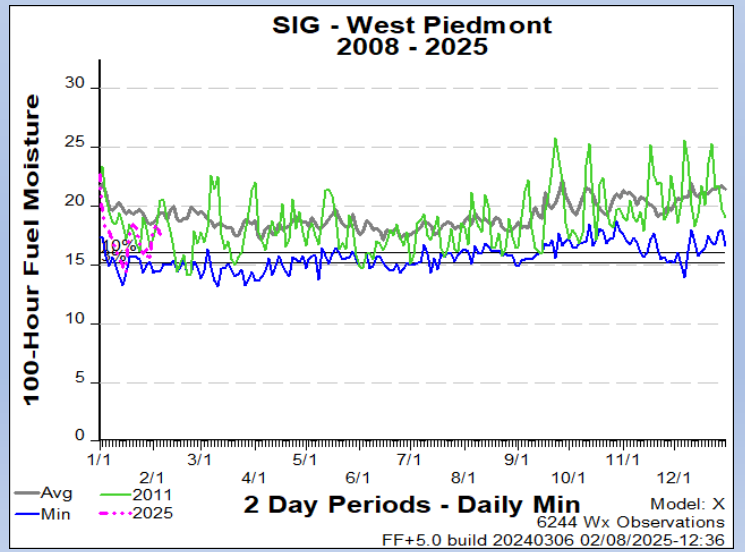
FDRA – Western Piedmont

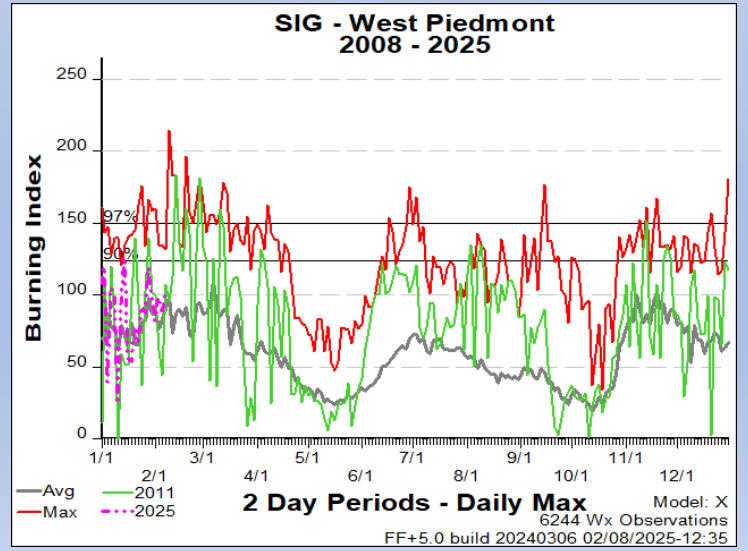


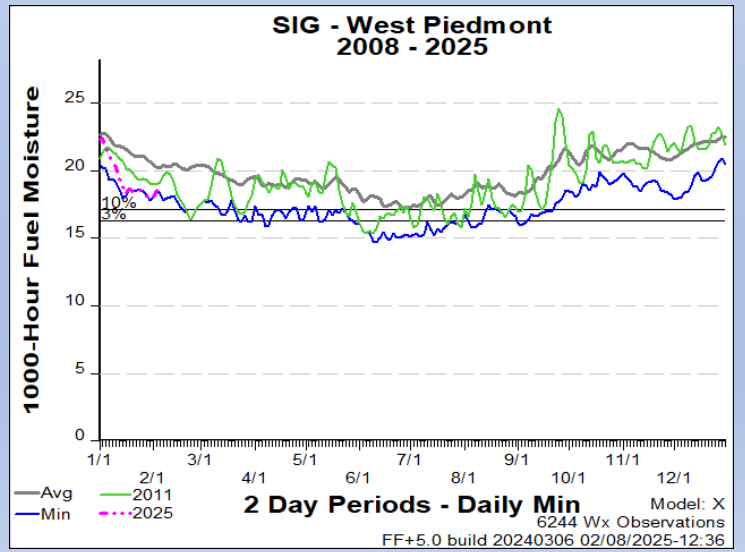




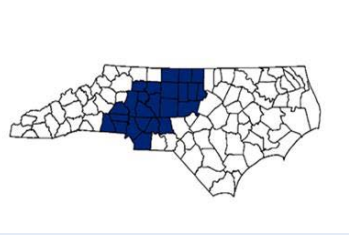




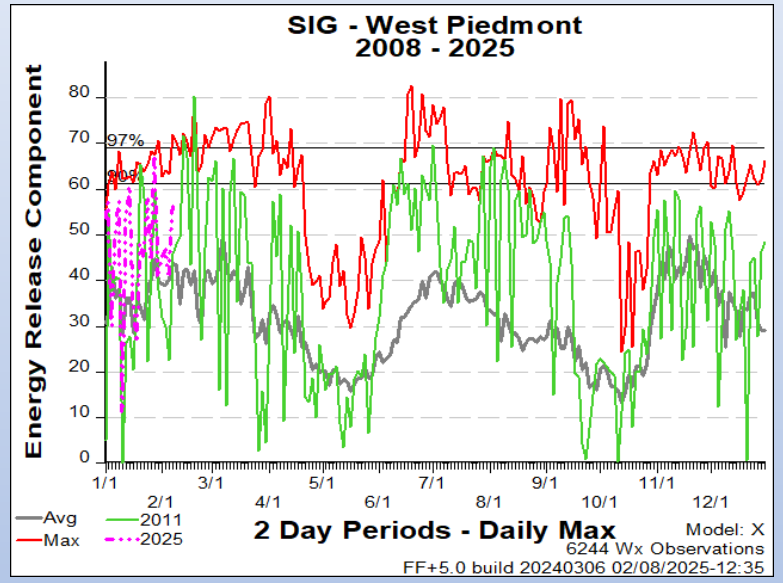




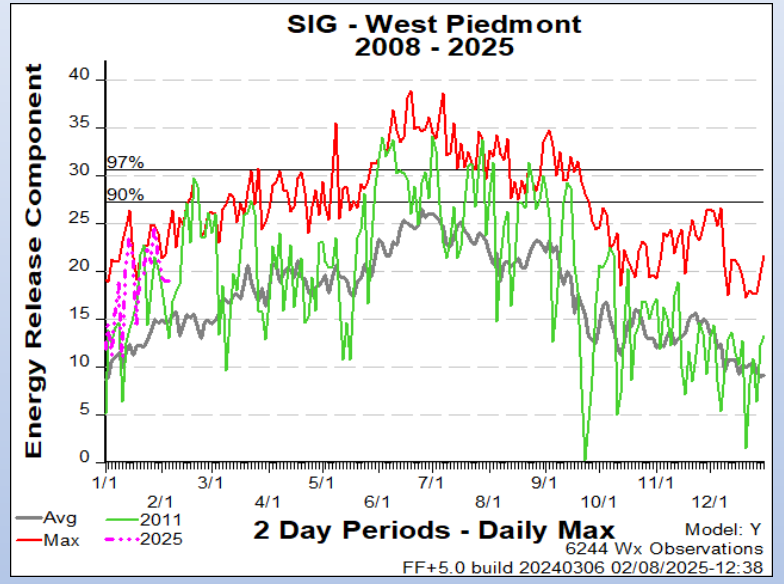
FDRA – Western Piedmont



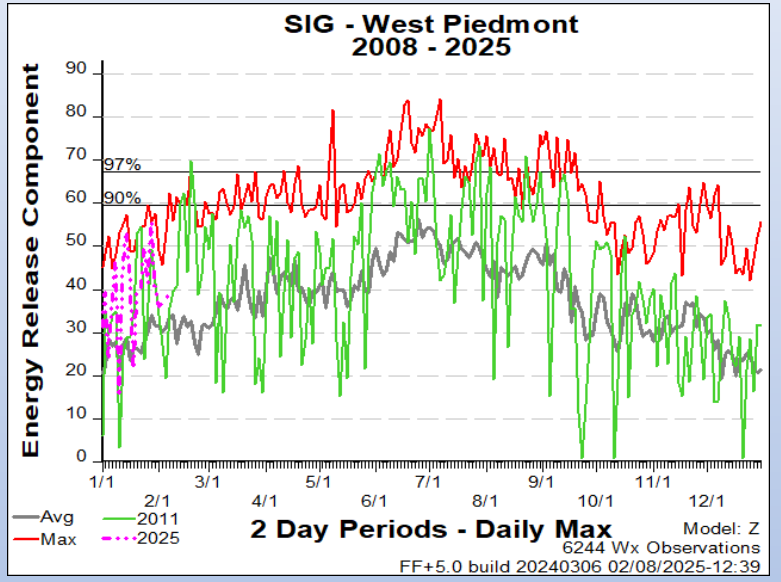
ERC-X



ERC-Y



ERC-Z



Comparison of ERC by NFDRS Fuel Model

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

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

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

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

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	SAT 08-Feb	SUN 09-Feb	MON 10-Feb	TUE 11-Feb	WED 12-Feb	THU 13-Feb	FRI 14-Feb
Avg. Max. Temp. (°F)	56	68	47	40	47	56	53
Avg. Min. Humidity (%)	61	37	60	88	80	60	48
Avg. 20' Wind Speed (mph)	4	8	6	3	4	7	5
Avg. Wind Direction*	SE	SW	NE	ENE	NE	SW	SE
Avg. Probability of Precip. (%)	12	46	61	93	78	59	14
Days Since a Wetting Rain**	6.3	7.3	8.3	9.3			
Forecast ERC (Fuel Model X)	51.2	39.2	45.0	24.2	0.0	6.6	34.0
Forecast BI (Fuel Model X)	77.3	91.1	84.8	57.5	0.0	24.7	76.7
Forecast IC (Fuel Model X)	5.2	5.4	4.3	1.4	0.0	0.7	2.8
Forecast 100-Hr. FMC	18.5	18.4	18.4	18.4	19.0	22.7	23.7
Forecast 1000-Hr. FMC	21.1	21.0	21.0	21.0	21.1	21.1	21.1
KBDI	47.7						

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

Data Source:

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

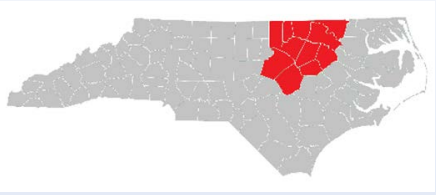
Values in the table above are averages from 3 stations in this FDRA:

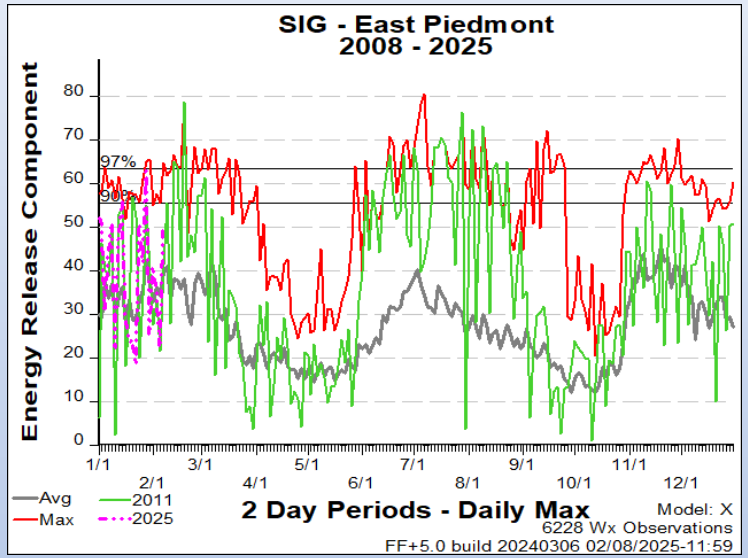
- **Duke Forest** (312501)
- **Lexington** (314602)
- **Mt. Island Lake** (316602)

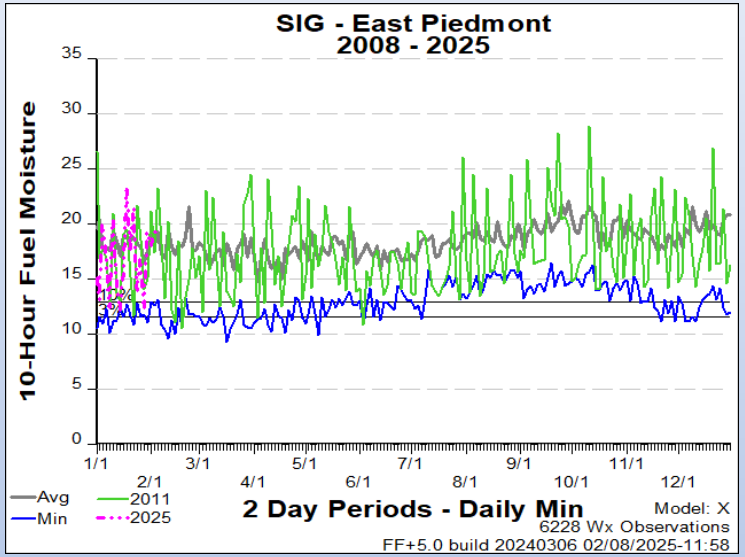
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 40°F	Between 40°F and 50°F	Greater than 50°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 2 mph	Between 2 mph and 4 mph	Greater than 4 mph
Avg. Wind Direction*	Criticality of wind direction is highly dependent on burn operations and/or structures threatened.		
Days Since a Wetting Rain**	A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted above.		
Energy Release Comp.	Less than 40	Between 40 and 52	Greater than 52
Burning Index	Less than 95	Between 95 and 120	Greater than 120
Ignition Component	Less than 9	Between 9 and 14	Greater than 14
100-Hour Fuel Moisture	Greater than 18%	Between 17% and 18%	Less than 17%
1000-Hour Fuel Moisture	Greater than 19%	Between 18% and 19%	Less than 18%
KBDI	Less than 344	Between 344 and 479	Greater than 479

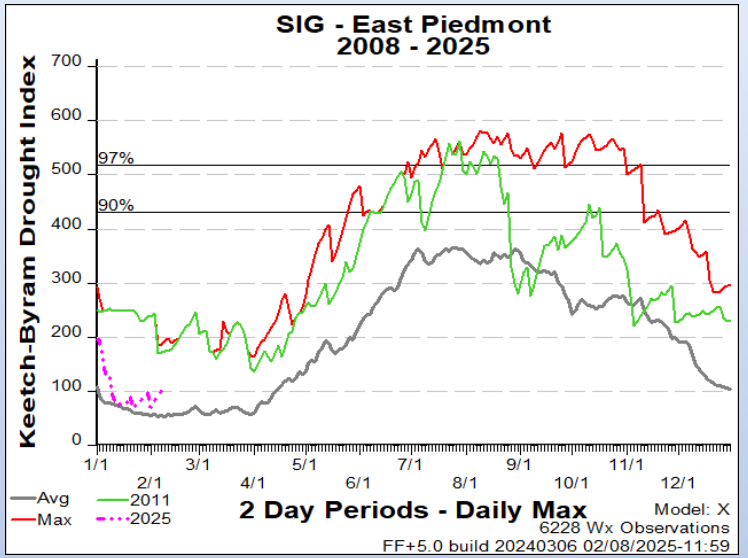
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

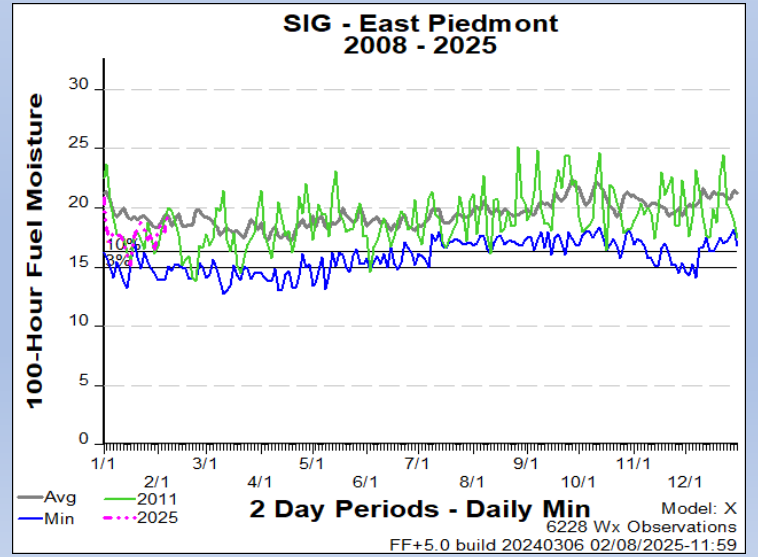
FDRA – Eastern Piedmont

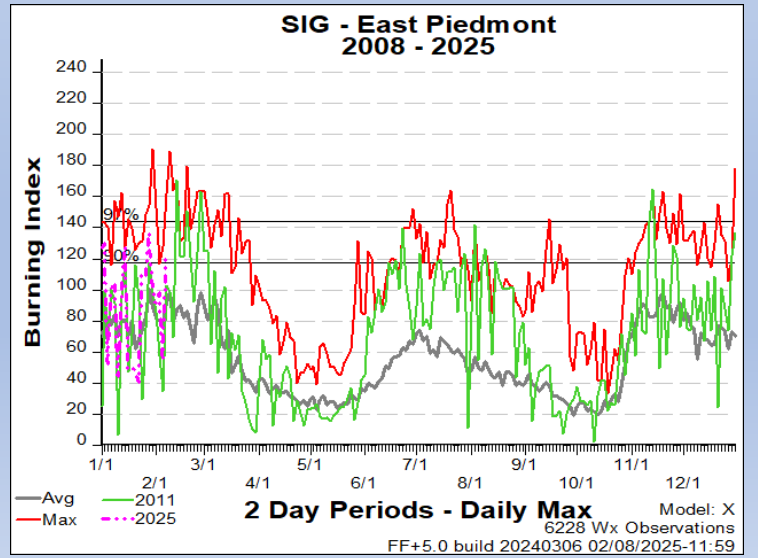


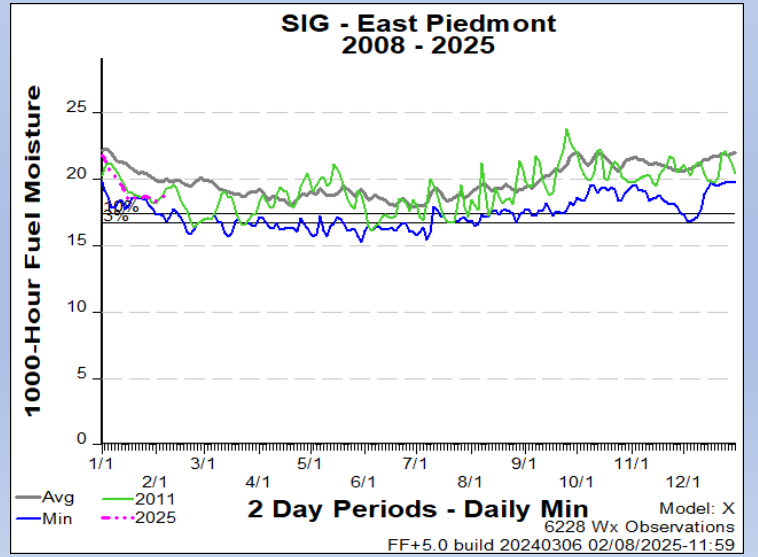












Weekly Outlook

Eastern Piedmont FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

Four or more **RED** blocks in a day signals the potential for a **Critical Fire Day**

DAY	SAT 08-Feb	SUN 09-Feb	MON 10-Feb	TUE 11-Feb	WED 12-Feb	THU 13-Feb	FRI 14-Feb
Avg. Max. Temp. (°F)	50	68	43	40	49	60	52
Avg. Min. Humidity (%)	72	36	63	89	81	63	50
Avg. 20' Wind Speed (mph)	4	9	6	3	4	7	5
Avg. Wind Direction*	ESE	WSW	NE	ENE	NE	SW	ESE
Avg. Probability of Precip. (%)	22	47	53	92	71	60	12
Days Since a Wetting Rain**	1.0	2.0	2.3	3.3			
Forecast ERC (Fuel Model X)	41.6	34.5	40.8	19.1	1.0	12.8	28.0
Forecast BI (Fuel Model X)	67.6	94.2	79.6	52.9	5.8	51.9	72.3
Forecast IC (Fuel Model X)	3.6	5.4	3.9	1.3	0.1	1.5	2.5
Forecast 100-Hr. FMC	19.5	19.3	18.9	19.1	20.0	22.7	22.9
Forecast 1000-Hr. FMC	20.8	20.7	20.7	20.8	20.8	20.8	20.8
KBDI	100.0						

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

Data Source:

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

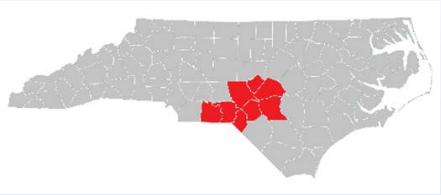
Values in the table above are averages from 4 stations in this FDRA:

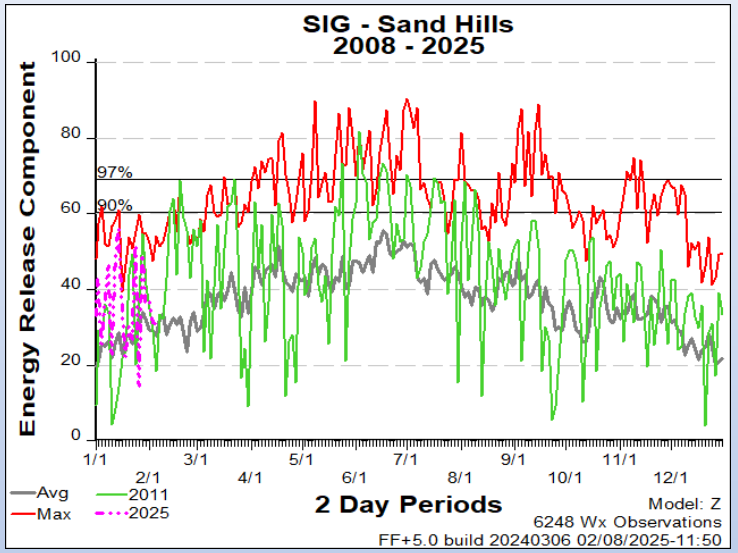
- **Oxford Tobacco Research Stn** (310841)
- **Upper Coastal Plain Res Stn** (312940)
- **Lake Wheeler Rd Field Lab** (314941)
- **Central Crops Research Station** (317441)

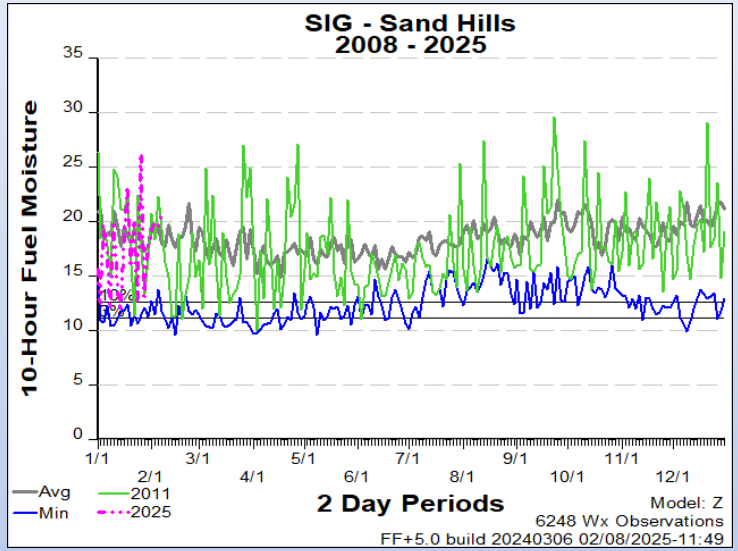
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 10 mph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

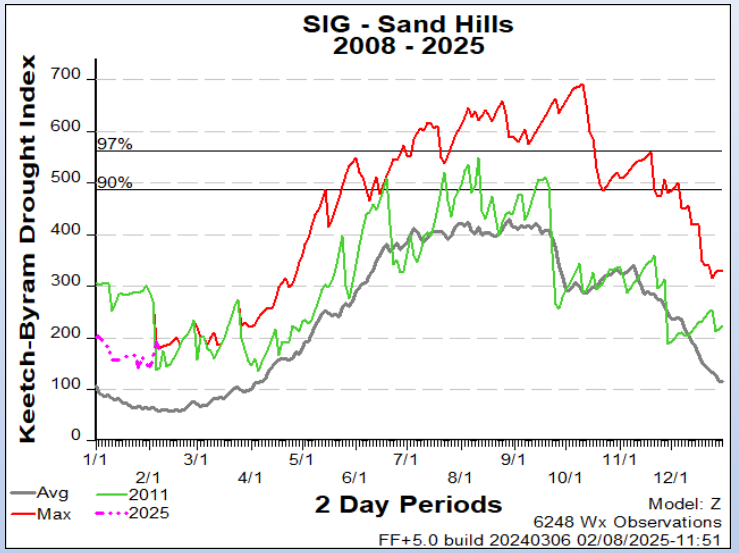
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

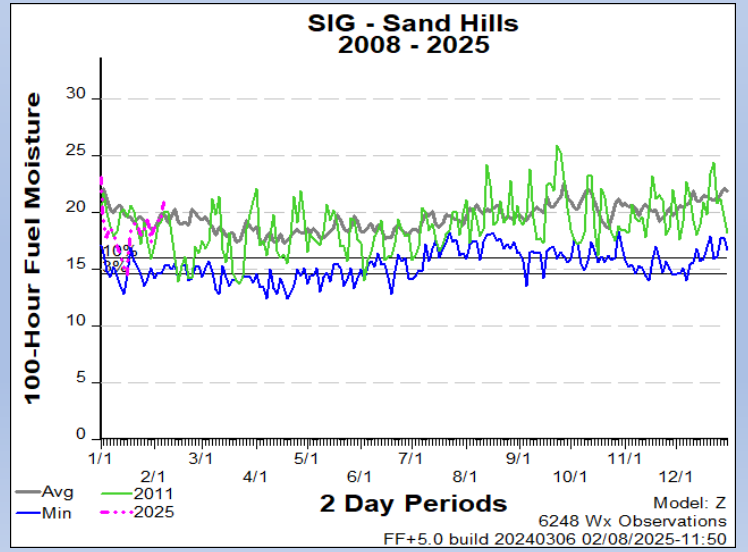
FDRA – Sandhills

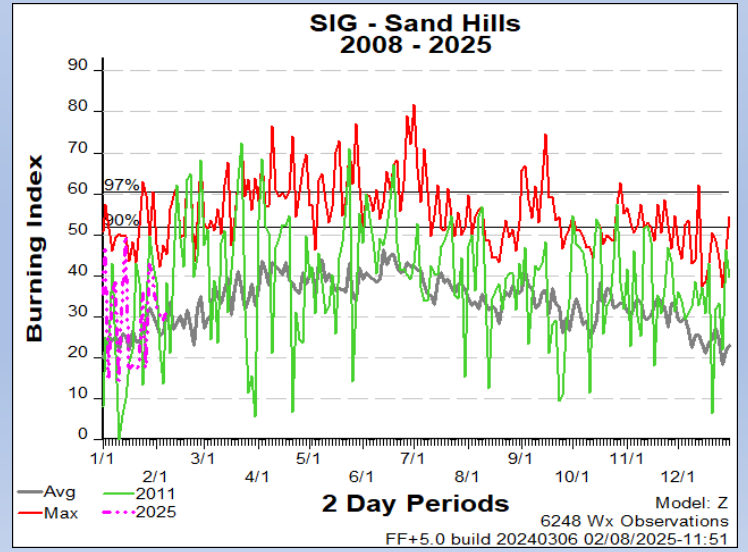


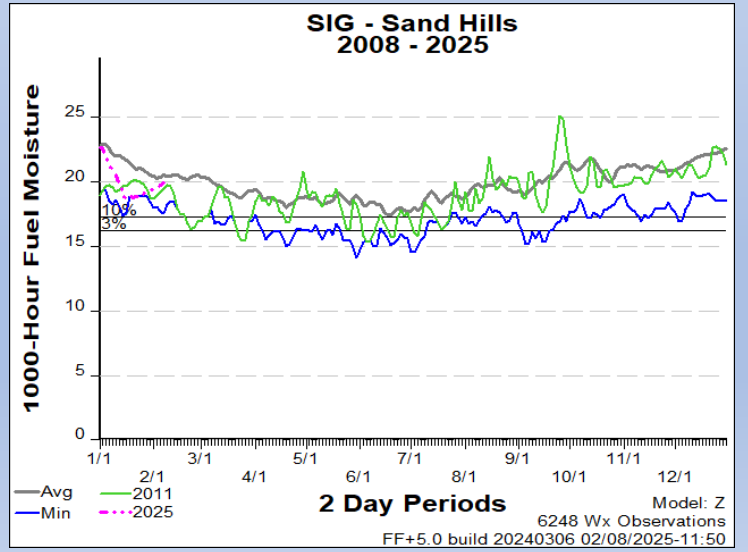












Weekly Outlook

Sandhills FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

Four or more **RED** blocks in a day signals the potential for a **Critical Fire Day**

DAY	SAT 08-Feb	SUN 09-Feb	MON 10-Feb	TUE 11-Feb	WED 12-Feb	THU 13-Feb	FRI 14-Feb
Avg. Max. Temp. (°F)	59	73	46	44	56	63	56
Avg. Min. Humidity (%)	67	40	66	85	74	59	44
Avg. 20' Wind Speed (mph)	4	9	7	4	5	8	5
Avg. Wind Direction*	SE	SSW	NE	NE	NE	SW	ESE
Avg. Probability of Precip. (%)	11	49	56	90	73	61	14
Days Since a Wetting Rain**	6.0	7.0	8.0	9.0			
Forecast ERC (Fuel Model Z)	36.0	26.9	33.9	21.1	2.1	15.8	20.8
Forecast BI (Fuel Model Z)	26.5	30.0	31.5	22.4	3.9	24.7	25.2
Forecast IC (Fuel Model Z)	4.2	4.2	3.6	1.1	0.0	1.8	2.3
Forecast 100-Hr. FMC	20.1	19.5	19.2	19.5	21.0	23.0	23.6
Forecast 1000-Hr. FMC	21.6	21.6	21.5	21.5	21.6	21.6	21.6
KBDI	176.3						

Data Source:

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

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

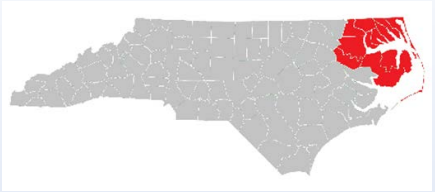
- **Sandhills Research Station** (317040)
- **Rockingham** (318202)
- **Fort Liberty** (318503)

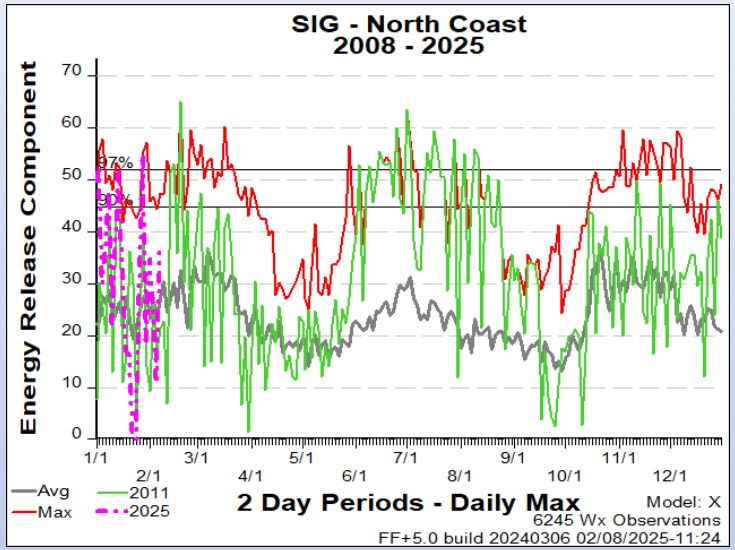
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 40%	Between 30% and 40%	Less than 30%
Avg. 20' Wind Speed	Less than 4 mph	Between 4 mph and 8 mph	Greater than 8 mph
Avg. Wind Direction*	Criticality of wind direction is highly dependent on burn operations and/or structures threatened.		
Days Since a Wetting Rain**	A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted above.		
Energy Release Comp.	Less than 52.4	Between 52.4 and 62	Greater than 62
Burning Index	Less than 45.6	Between 45.6 and 53.3	Greater than 53.3
Ignition Component	Less than 13.6	Between 13.6 and 18.8	Greater than 18.8
100-Hour Fuel Moisture	Greater than 17.4%	Between 16% and 17.4%	Less than 16%
1000-Hour Fuel Moisture	Greater than 18.2%	Between 17.2% and 18.2%	Less than 17.2%
KBDI	Less than 397	Between 397 and 500	Greater than 500

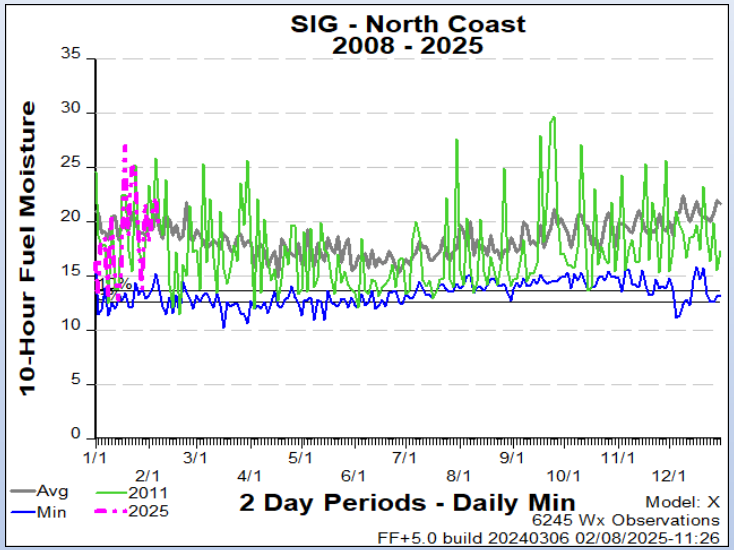
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

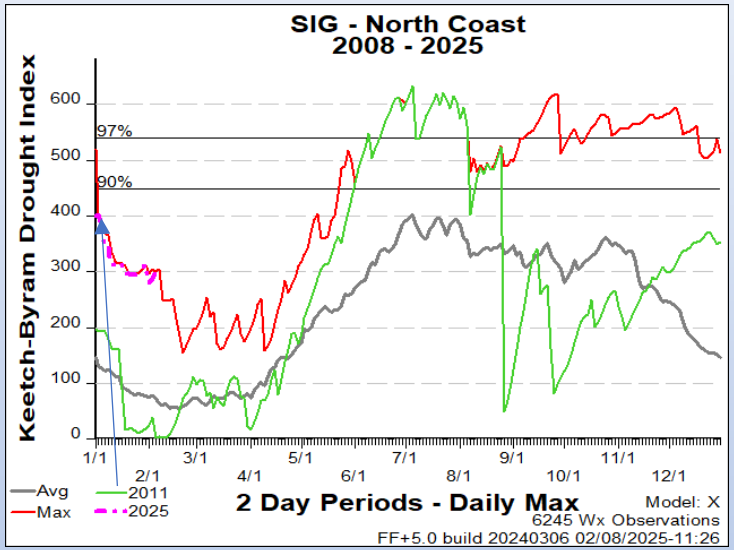
0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

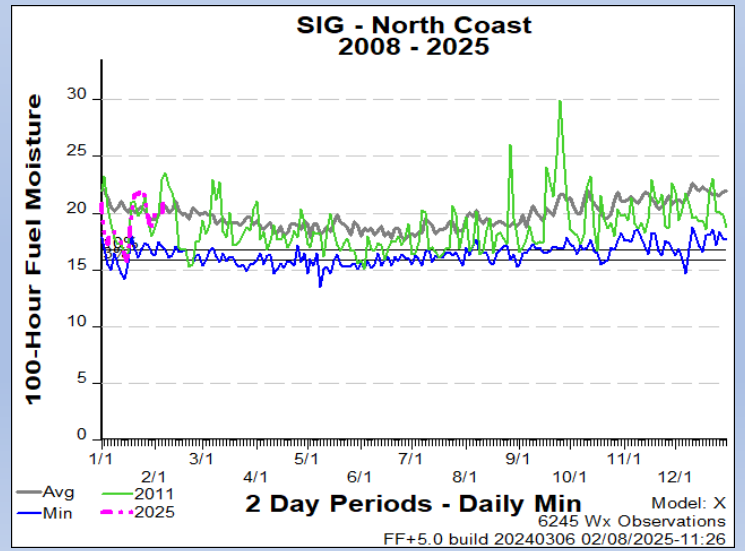
FDRA – North Coast

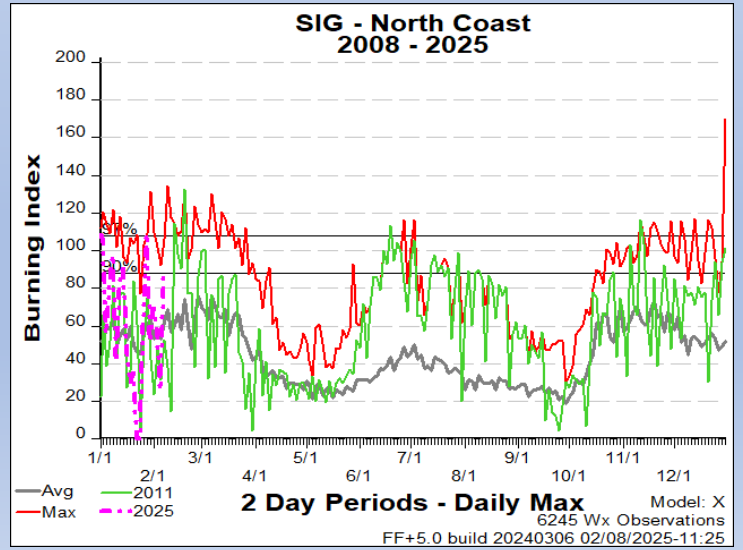


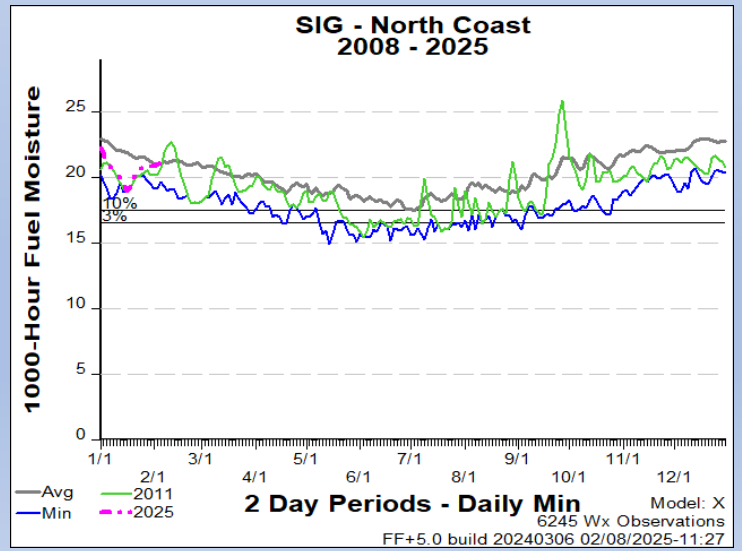






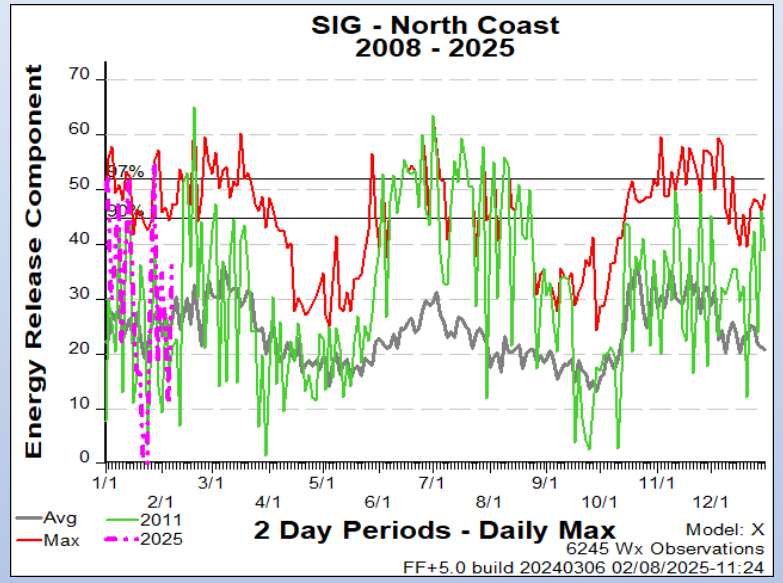




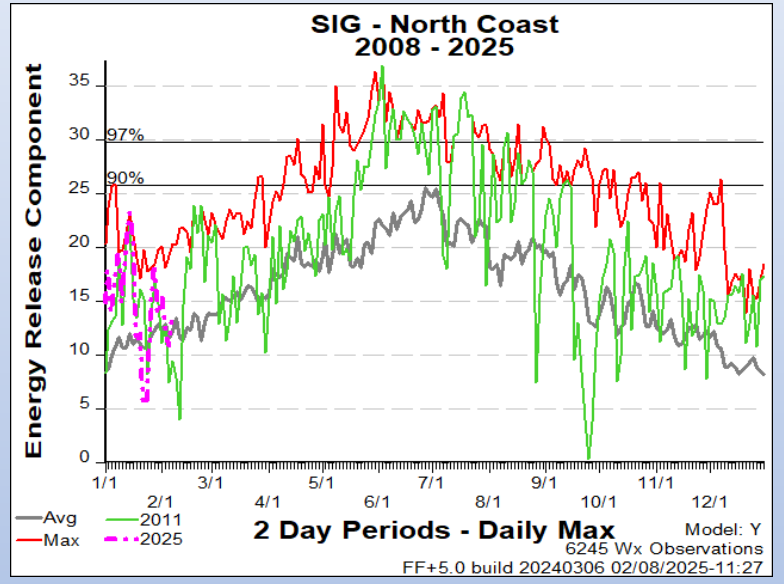


FDRA – North Coast

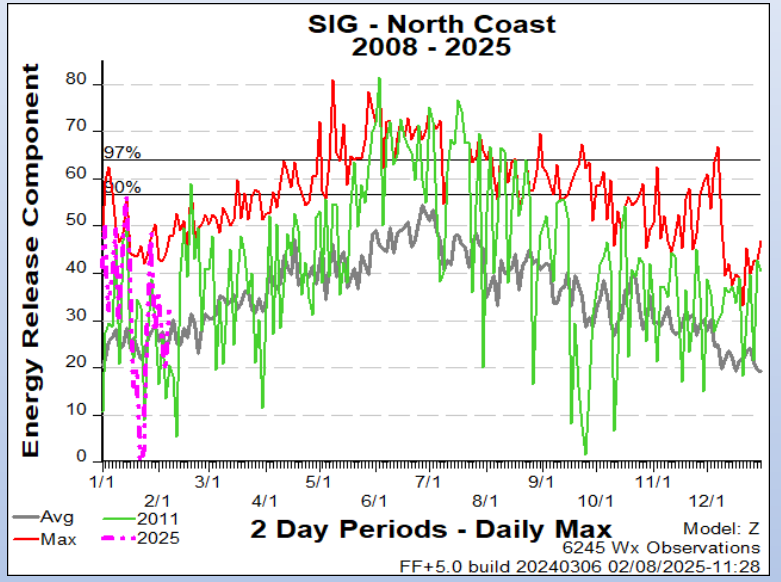
ERC-X



ERC-Y



ERC-Z



Comparison of ERC by NFDRS Fuel Model

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

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

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

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

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	SAT 08-Feb	SUN 09-Feb	MON 10-Feb	TUE 11-Feb	WED 12-Feb	THU 13-Feb	FRI 14-Feb
Avg. Max. Temp. (°F)	50	66	44	48	55	67	52
Avg. Min. Humidity (%)	87	51	64	83	76	64	44
Avg. 20' Wind Speed (mph)	6	10	7	6	6	9	7
Avg. Wind Direction*	SE	SSW	NNE	E	ENE	SW	SE
Avg. Probability of Precip. (%)	35	46	50	91	76	65	11
Days Since a Wetting Rain**	3.3	4.3	0.0	1.0			
Forecast ERC (Fuel Model X)	39.2	26.0	29.6	17.5	2.1	10.5	33.1
Forecast BI (Fuel Model X)	77.9	76.9	72.3	54.5	6.1	35.4	70.5
Forecast IC (Fuel Model X)	5.1	4.6	3.2	2.0	0.2	1.1	4.2
Forecast 100-Hr. FMC	20.0	19.6	19.2	19.0	19.4	21.7	21.7
Forecast 1000-Hr. FMC	22.5	22.6	22.6	22.5	22.7	22.7	22.7
KBDI	293.5						

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

Data Source:

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

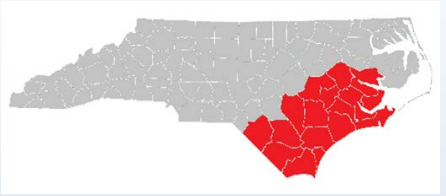
Values in the table above are averages from 4 stations in this FDRA:

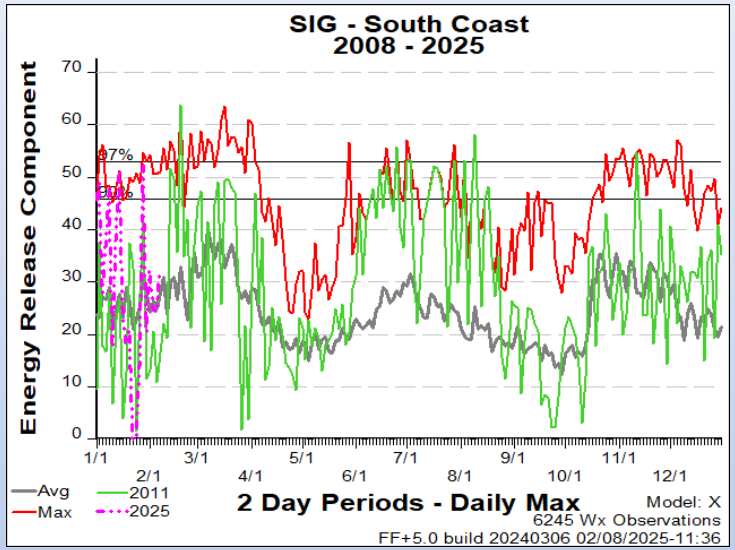
- **Elizabeth City** (311503)
- **Greens Cross** (313001)
- **Pocosin Lakes** (315201)
- **Fairfield** (317901)

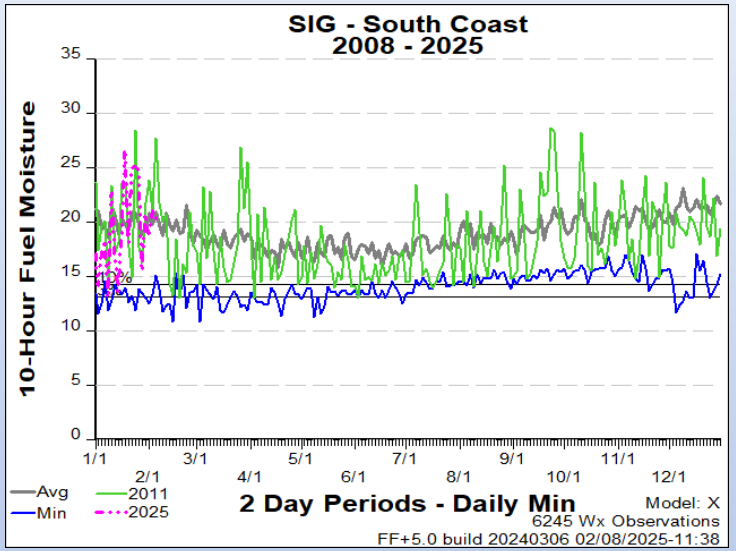
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 45°F	Between 45°F and 55°F	Greater than 55°F
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 10 mph	Between 10 mph and 15 mph	Greater than 15 mph
Avg. Wind Direction*	Criticality of wind direction is highly dependent on burn operations and/or structures threatened.		
Days Since a Wetting Rain**	A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted above.		
Energy Release Comp.	Less than 39.3	Between 39.3 and 48	Greater than 48
Burning Index	Less than 78	Between 78 and 96.8	Greater than 96.8
Ignition Component	Less than 9.3	Between 9.3 and 12.8	Greater than 12.8
100-Hour Fuel Moisture	Greater than 17.7%	Between 16.8% and 17.7%	Less than 16.8%
1000-Hour Fuel Moisture	Greater than 18.5%	Between 17.5% and 18.5%	Less than 17.5%
KBDI	Less than 365	Between 365 and 463	Greater than 463

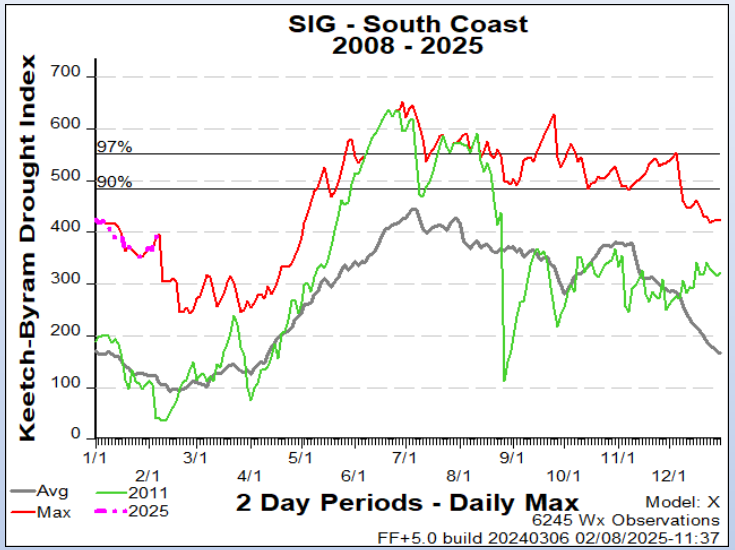
Other factors to consider when determining fire danger: **sky conditions, precipitation amount, number of days since rain,** and **season**

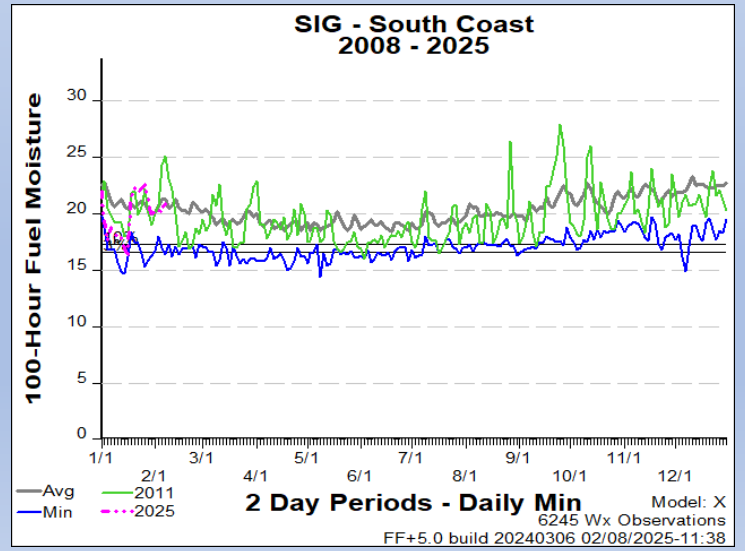
FDRA – South Coast

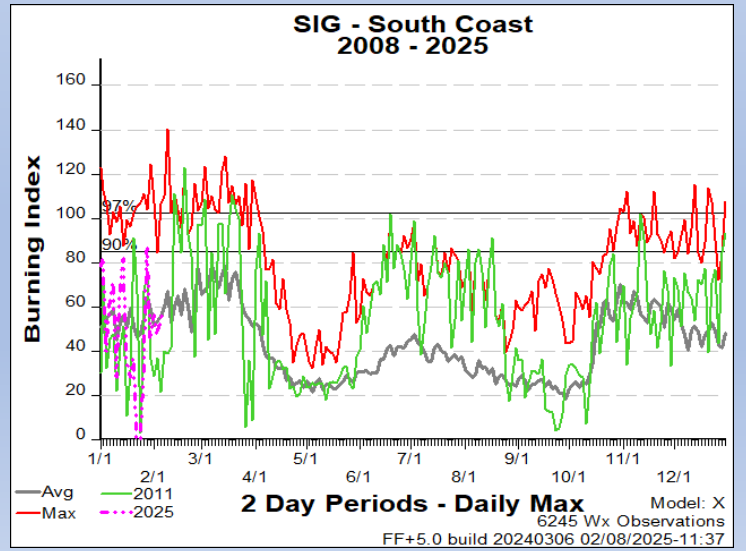


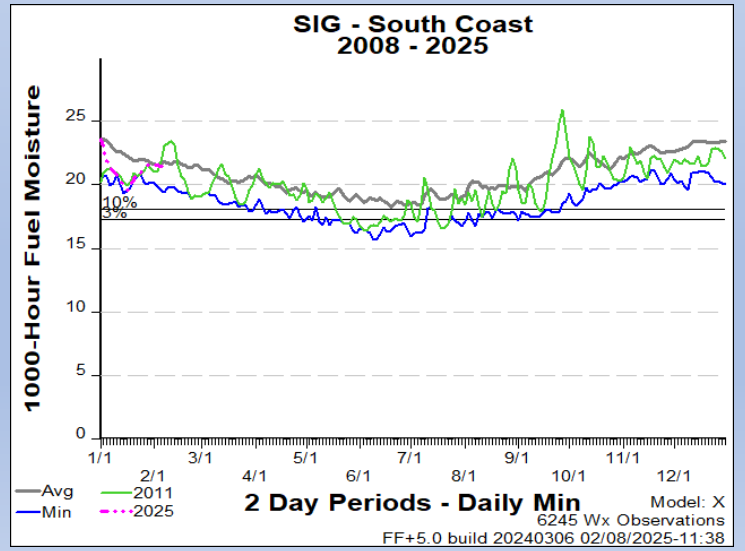






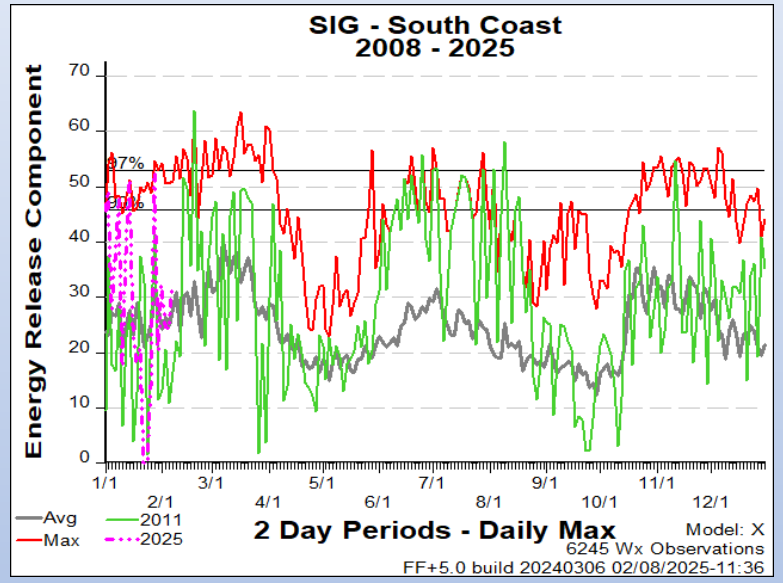




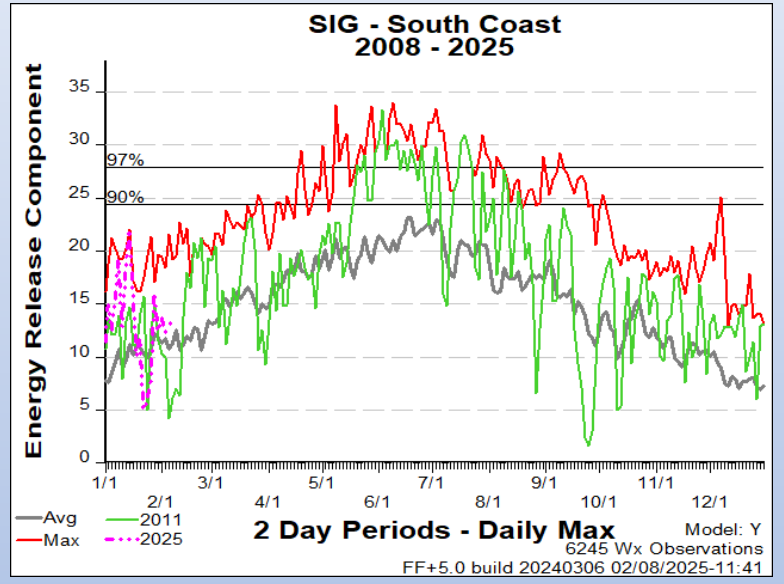


FDRA – South Coast

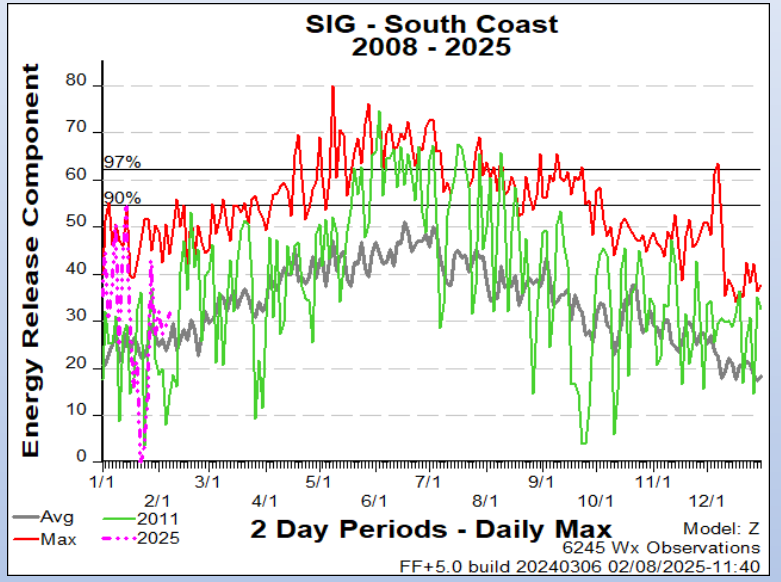
ERC-X



ERC-Y



ERC-Z



Comparison of ERC by NFDRS Fuel Model

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

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

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

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

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	SAT 08-Feb	SUN 09-Feb	MON 10-Feb	TUE 11-Feb	WED 12-Feb	THU 13-Feb	FRI 14-Feb
Avg. Max. Temp. (°F)	62	73	47	52	59	69	57
Avg. Min. Humidity (%)	78	48	69	77	71	64	45
Avg. 20' Wind Speed (mph)	5	8	7	5	4	8	6
Avg. Wind Direction*	ESE	SSW	NE	E	ESE	WSW	ESE
Avg. Probability of Precip. (%)	14	53	59	80	67	59	18
Days Since a Wetting Rain**	8.3	9.3	4.0	5.0			
Forecast ERC (Fuel Model X)	28.9	22.4	31.2	14.6	6.0	11.2	35.9
Forecast BI (Fuel Model X)	56.9	62.4	75.4	36.6	16.7	38.9	76.1
Forecast IC (Fuel Model X)	3.3	3.6	3.6	1.1	0.4	1.4	4.9
Forecast 100-Hr. FMC	20.3	20.4	20.2	20.1	20.4	21.8	21.6
Forecast 1000-Hr. FMC	23.1	23.1	23.0	23.0	23.1	23.0	22.9
KBDI	396.7						

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

Data Source:

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

Values in the table above are averages from 7 stations in this FDRA:

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

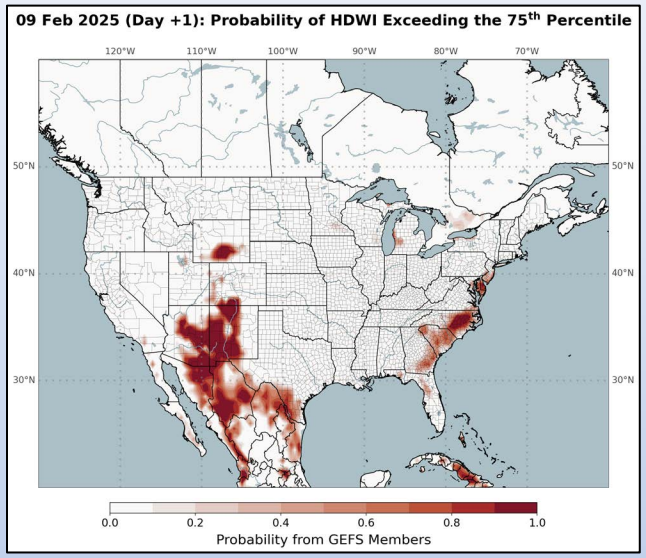
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 65°F	Greater than 65°F
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 5 mph	Between 5 mph and 10 mph	Greater than 10 mph
Avg. Wind Direction*	Criticality of wind direction is highly dependent on burn operations and/or structures threatened.		
Days Since a Wetting Rain**	A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted above.		
Energy Release Comp.	Less than 36.4	Between 36.4 and 47.2	Greater than 47.2
Burning Index	Less than 68.3	Between 68.3 and 89.5	Greater than 89.5
Ignition Component	Less than 7.9	Between 7.9 and 12	Greater than 12
100-Hour Fuel Moisture	Greater than 18.2%	Between 17.3% and 18.2%	Less than 17.3%
1000-Hour Fuel Moisture	Greater than 19%	Between 18% and 19%	Less than 18%
KBDI	Less than 385	Between 385 and 486	Greater than 486

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

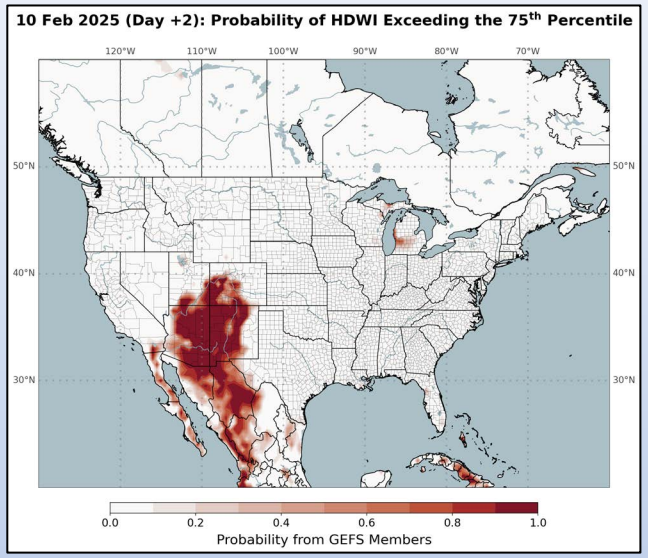
Statewide Slides

Hot-Dry-Windy Index (HDW)

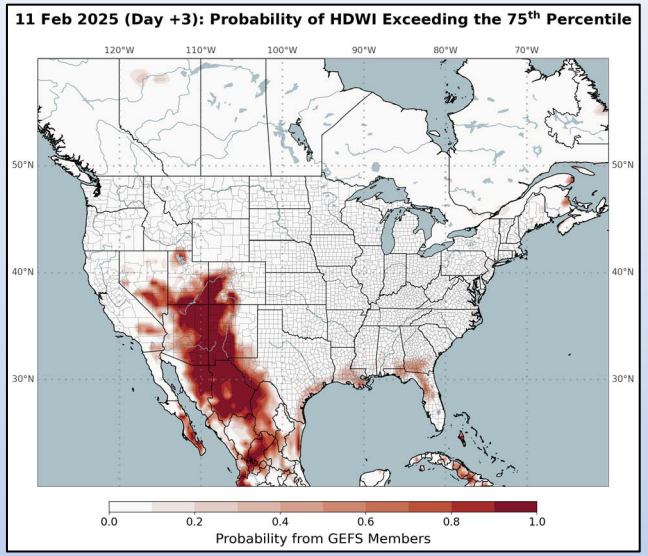
Sunday > 75th Percentile



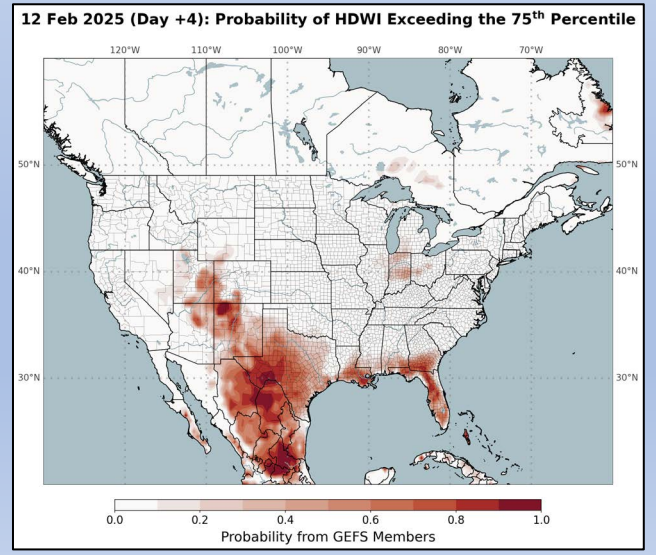
Monday > 75th Percentile



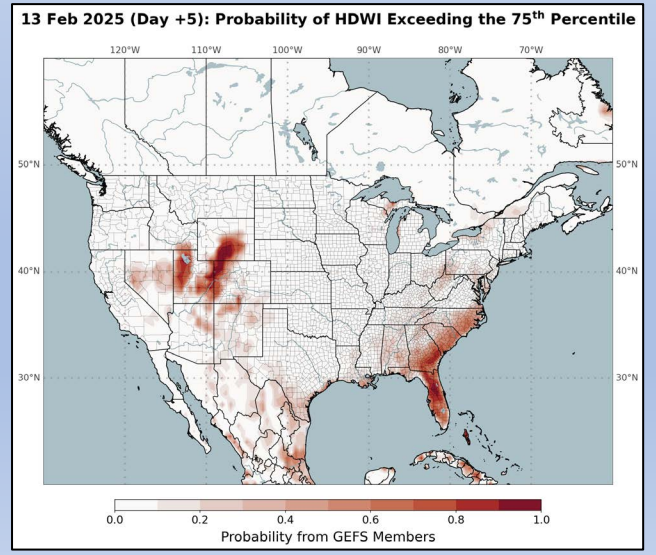
Tuesday > 75th Percentile



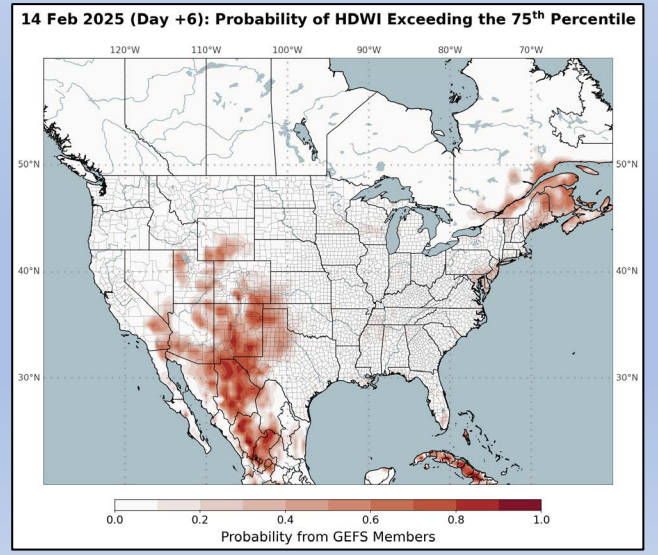
Wednesday > 75th Percentile



Thursday > 75th Percentile



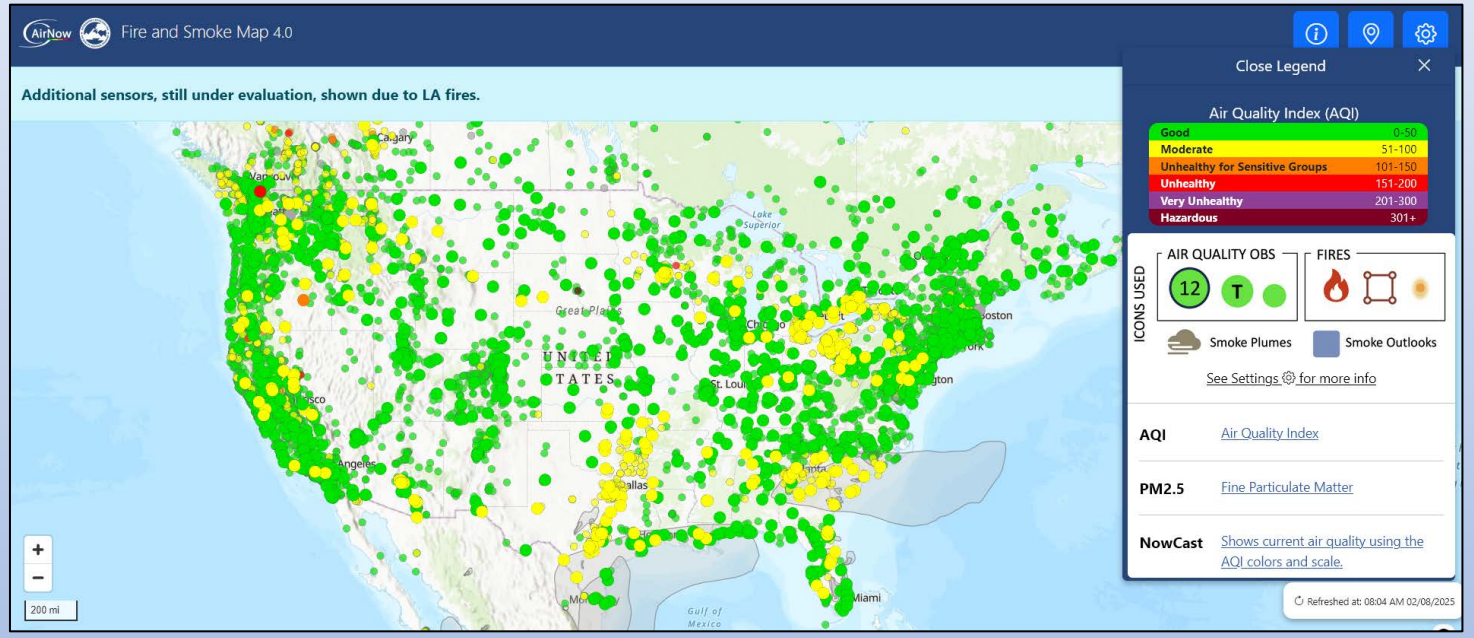
Friday > 75th Percentile



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

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

Air Quality Notes



https://fire.airnow.gov/#

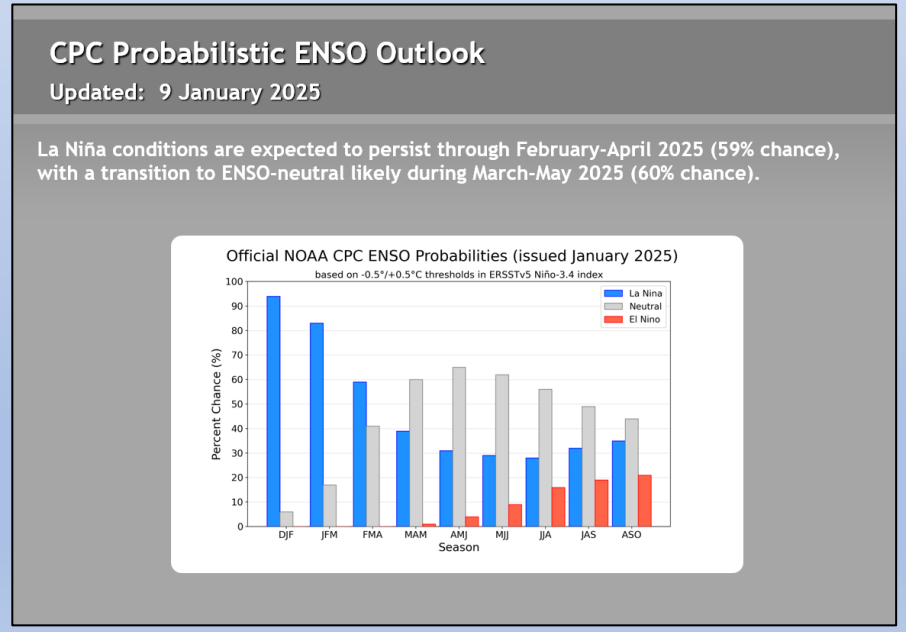
https://airquality.climate.ncsu.edu/discussion/?view=latest

ENSO Notes from the CPC (2/3/25 Update)

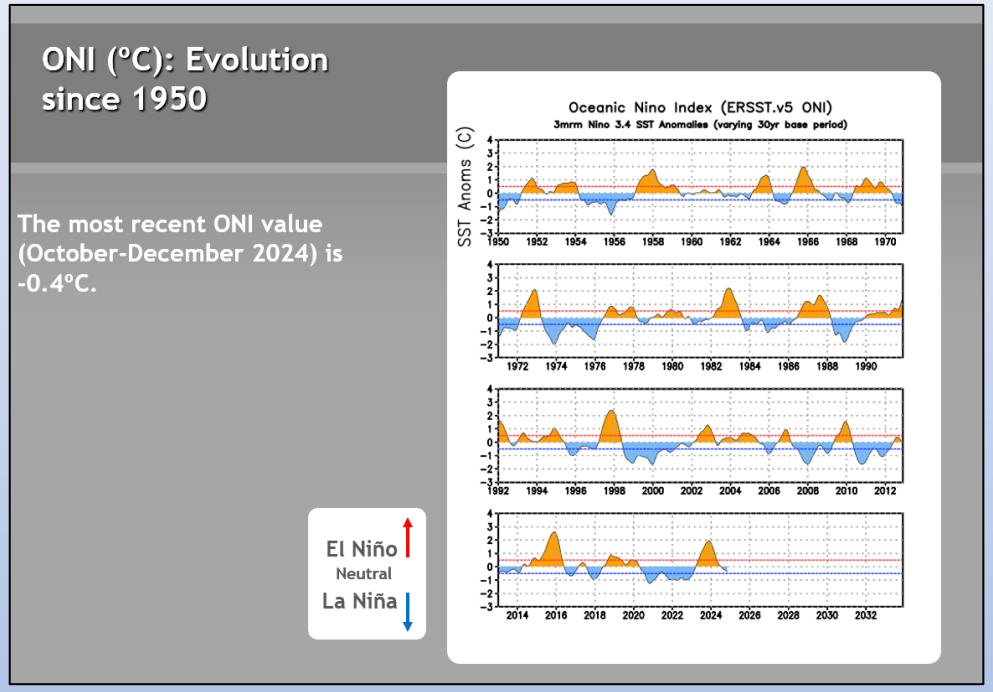
ENSO Alert System Status: **La Niña Advisory**

La Niña conditions are expected to persist through February-April 2025 (59% chance), with a transition to ENSO-neutral likely during March-May 2025 (60% chance).

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.



See this link for further discussion: https://www.climate.gov/news-features/understanding-climate/us-climate-outlook-january-2025



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

The dynamical models in the IRI plume continue to predict a weak La Niña during the winter seasons, as indicated by the Niño-3.4 index values less than -0.5°C [Fig. 6]. The North American Multi-Model Ensemble (NMME) predicts slightly cooler SST anomalies with La Niña persisting through February-April 2025. The forecast team favors the NMME guidance, predicting weak La Niña conditions through the early spring before transitioning to ENSO-neutral. Weak La Niña conditions are less likely to result in conventional winter/spring impacts, though predictable signals can still influence the forecast guidance (e.g., CPC's seasonal outlooks). In summary, La Niña conditions are present and are expected to persist through February-April 2025 (59% chance), with a transition to ENSO-neutral likely during March-May 2025 (60% chance; [Fig. 7]).

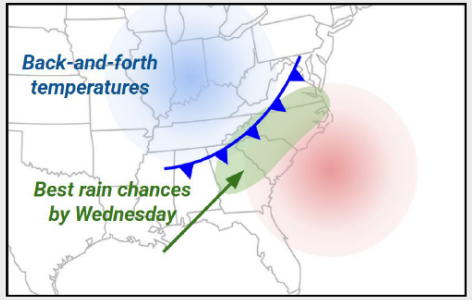
Slide Source: *https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.ppt*

State Climate Office: Short-Range Monthly Outlook for NC

Released 2/6/25 & Location: https://climate.ncsu.edu/fire/outlooks/

Short-Range Outlook for North Carolina

Week 1:
February 6 to 12, 2025



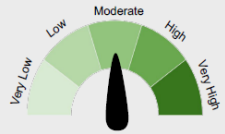
Big Temperature Swings

Our temperatures will take a roller coaster ride this week as we hop between the warm and cool side of a stalled frontal boundary. Afternoon highs will rise into the 70s on Sunday and as low as the 40s on Monday and Tuesday with more cloud cover by then.

An Unsettled Week

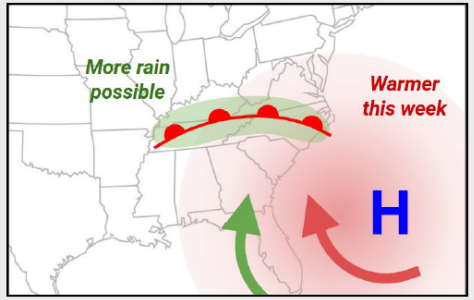
Light rain showers are expected most days this week as the frontal system stalls over us. The best chance for significant rain will likely come from our next system on Wednesday, with more than an inch possible across the Mountains and Piedmont of NC.

Forecast Confidence



The active pattern makes for lower confidence, particularly with our temperatures expected to bounce around this week.

Week 2:
February 13 to 19, 2025



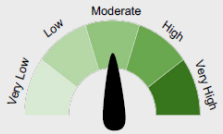
Warming Up This Week

Southerly circulation around offshore high pressure should keep our temperatures mostly above normal this week, with highs reaching into the 60s or 70s by next weekend. Variable temperatures are possible later in the week if any cold air sinks southward.

More Rain Chances

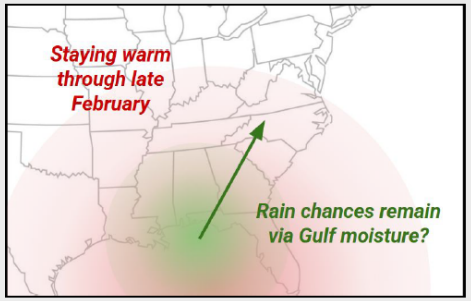
Moist air from the Gulf should move in across the Southeast and produce precipitation along the boundary between warm and cold air, located over us or just to our north. That should give us several shots of solid rain statewide by next weekend.

Forecast Confidence



Models have been in decent agreement about the large-scale pattern, but uncertainty is naturally higher almost 2 weeks out.

Weeks 3-4:
Feb. 20 to Mar. 5, 2025



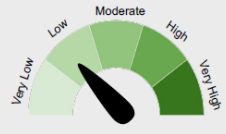
Remaining Warm

A continuing warm pattern is likely through the end of February with tropical high pressure promoting spring-like temperatures and humidity levels across the Southeast. Our normal highs in late February are in the mid to upper 50s with lows in the mid-30s.

Showers Continue?

Current longer-range forecasts favor more moisture moving in from the Gulf and bringing better chances of rain during this period. However, any breaks in that pattern could mean drier weather and a potentially early starting spring wildfire season.

Forecast Confidence



This forecast has a warm La Niña flavor but with better rain chances, which could easily flip the other direction by early March.

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

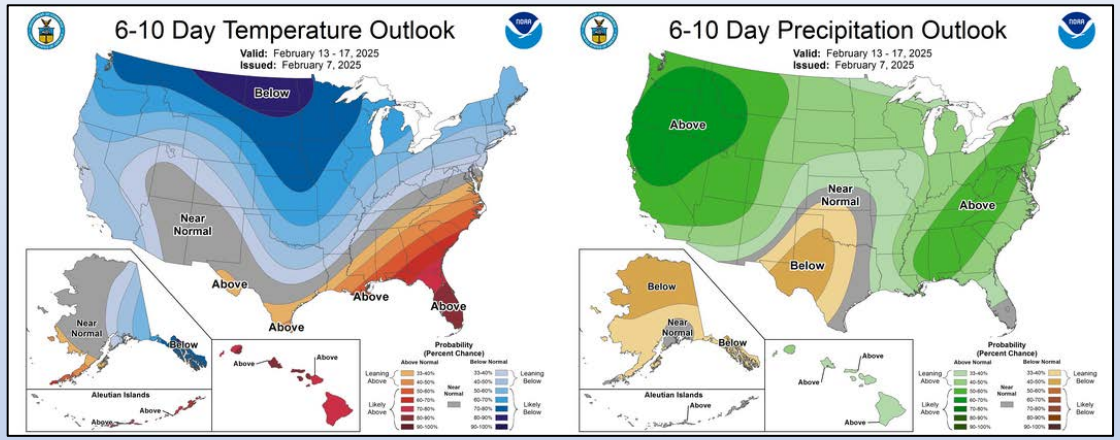
Author: Corey Davis (NCSCO)
cndavis@ncsu.edu

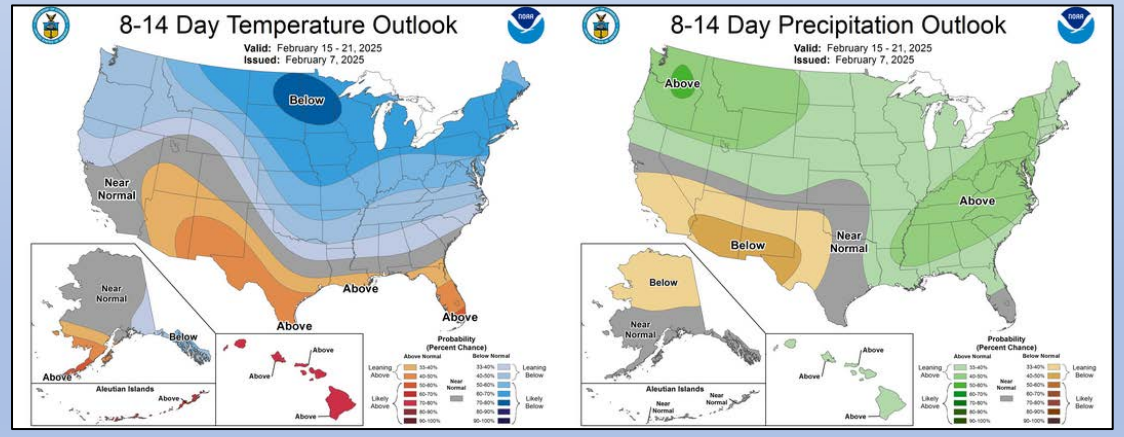
NORTH CAROLINA CLIMATE OFFICE

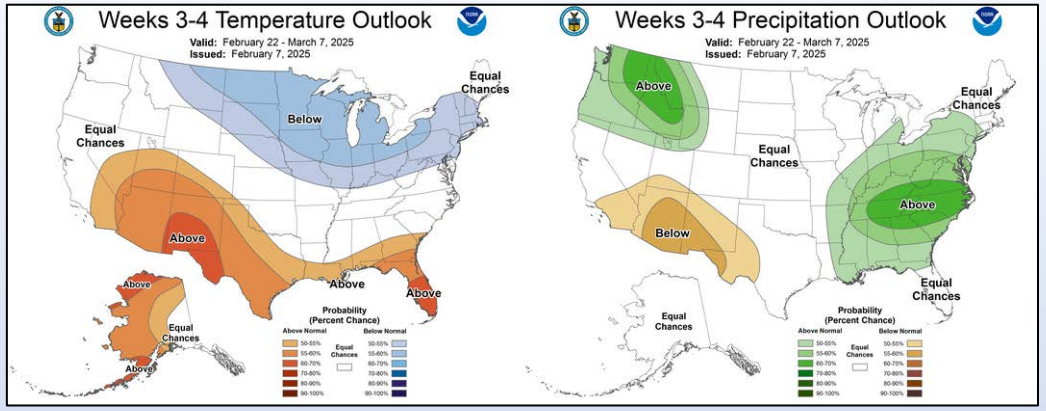
Supported by:

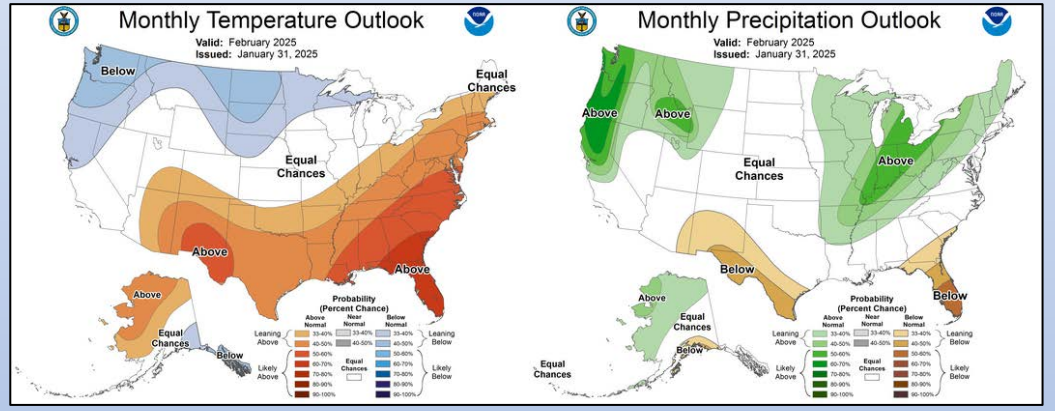
CPC Temp & Precip Outlook

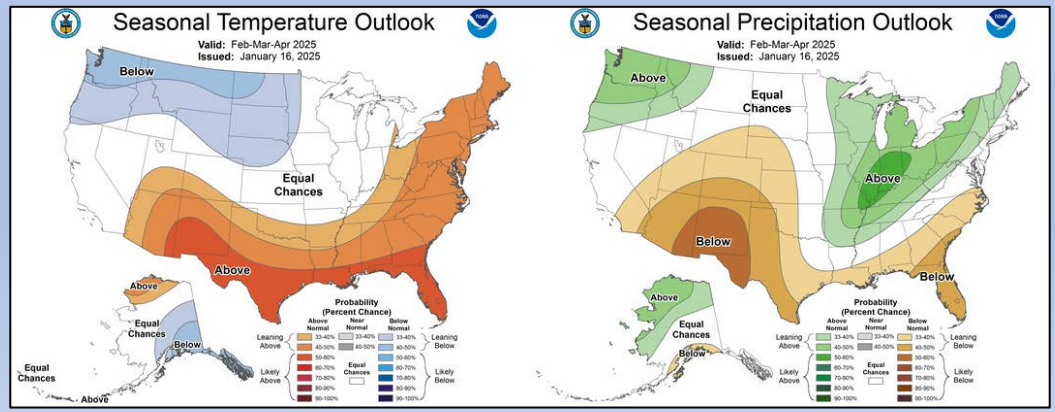
6-10 Day, 8-14 Day, Weeks 3-4, Monthly, 3-Month Seasonal









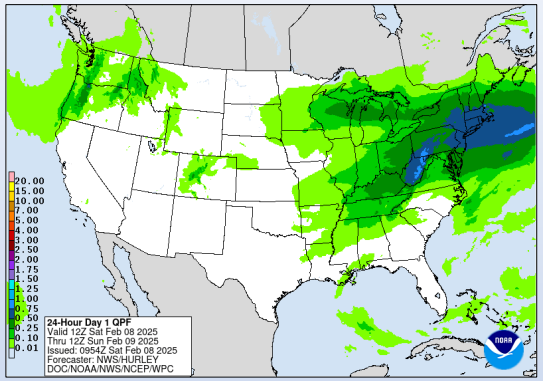


Source: https://www.cpc.ncep.noaa.gov/

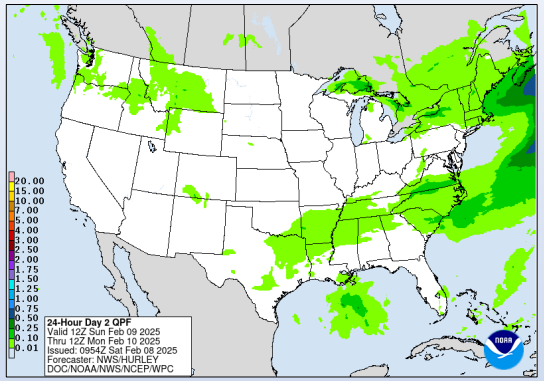
Quantitative Precipitation Forecast, 7-Day

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

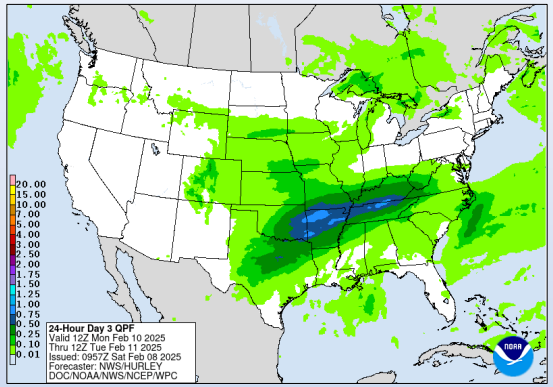
Day - 1



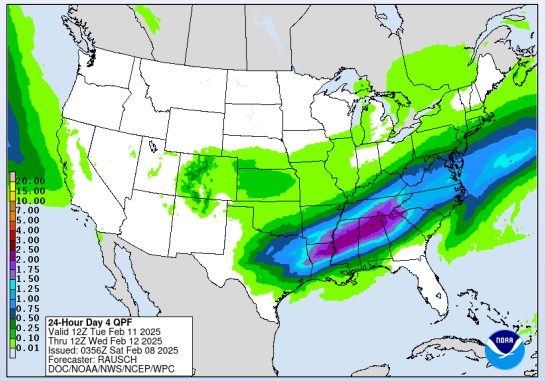
Day - 2



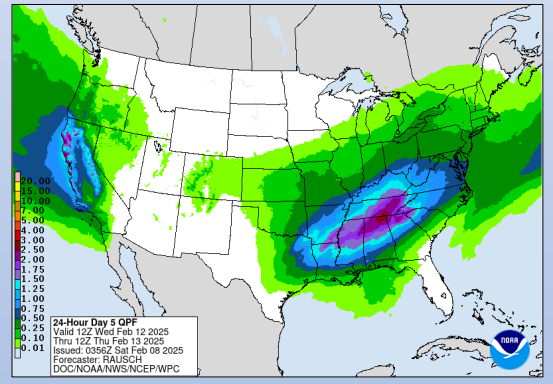
Day - 3



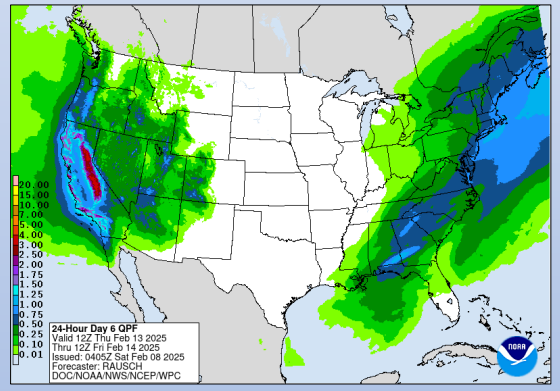
Day - 4



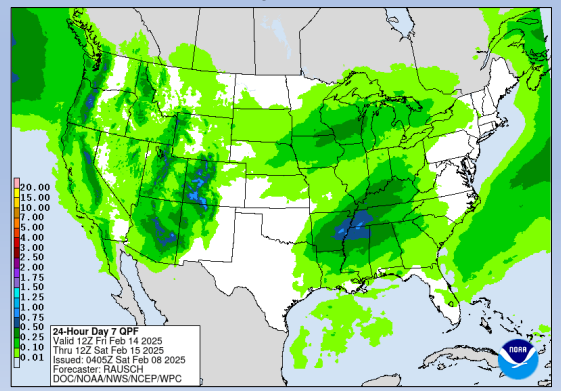
Day - 5



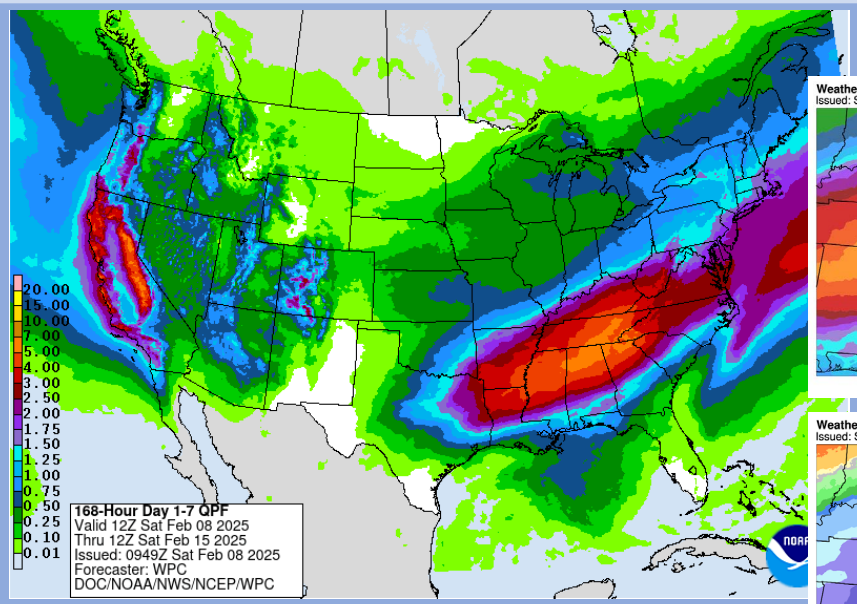
Day - 6

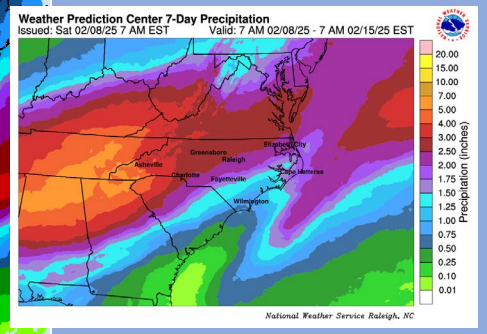


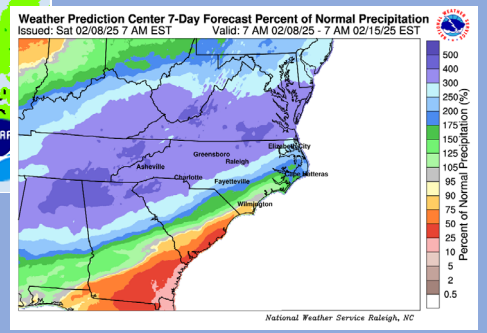
Day - 7



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





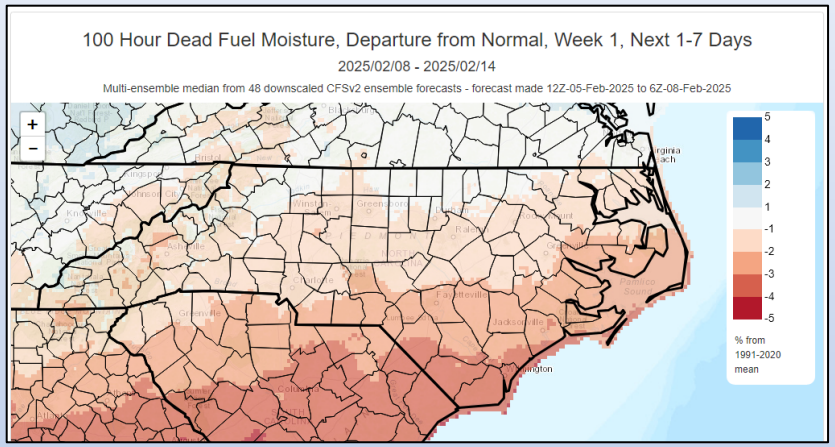


https://www.weather.gov/rah/qpf

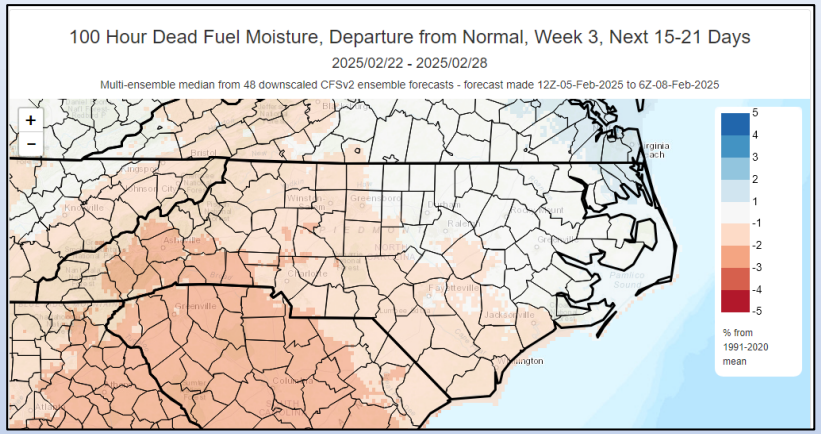
Modeled Departure from Normal by Week: 100-hr Fuels

Output relies on experimental forecast outputs and is subject to change

Week-1



Week-3

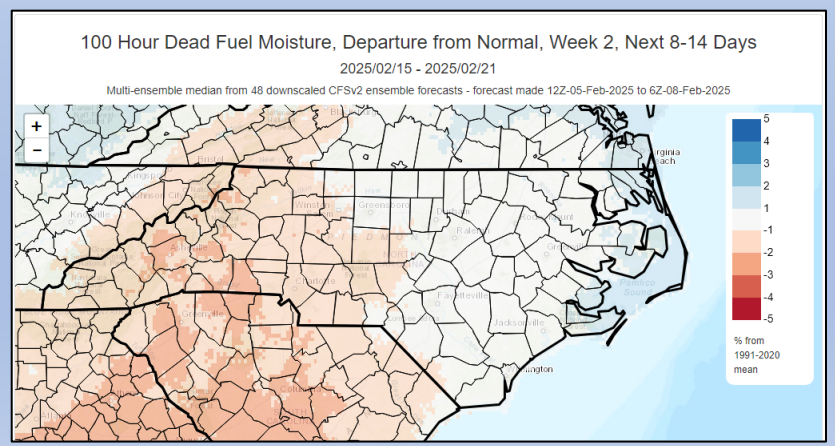


This output can provide insight into general drying trends and potential impacts to overall fire danger, especially prior to full green-up or in drought conditions. Outputs relate to interactions of warmer/colder temps, moist/dry air masses, precip amt/duration and overnight RH recovery trends.

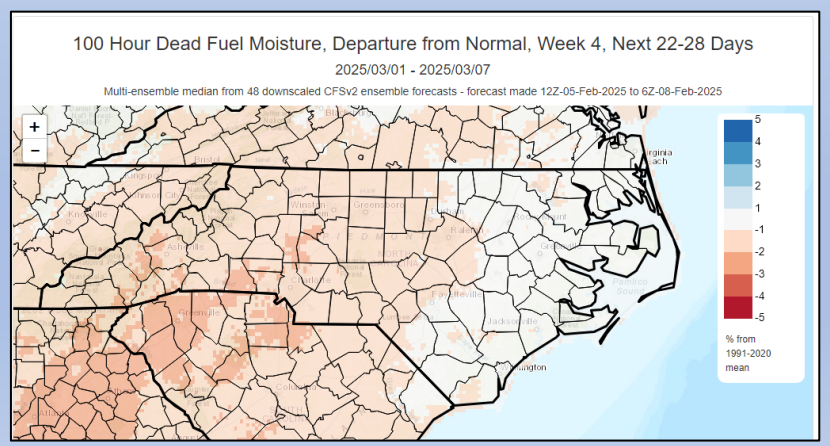
Note the <u>modeled</u> below normal conditions (lower % mc or "worse") for portions of the state in Weeks 1-4, with some areas favoring near normal later in the period.

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

Week-2



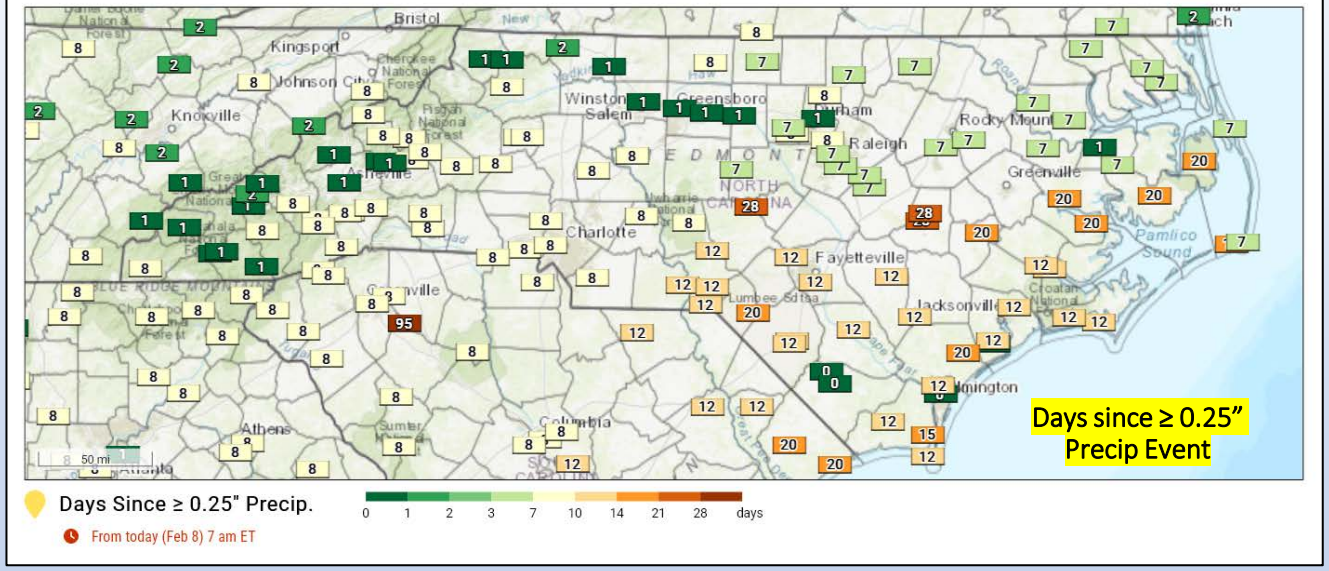
Week-4



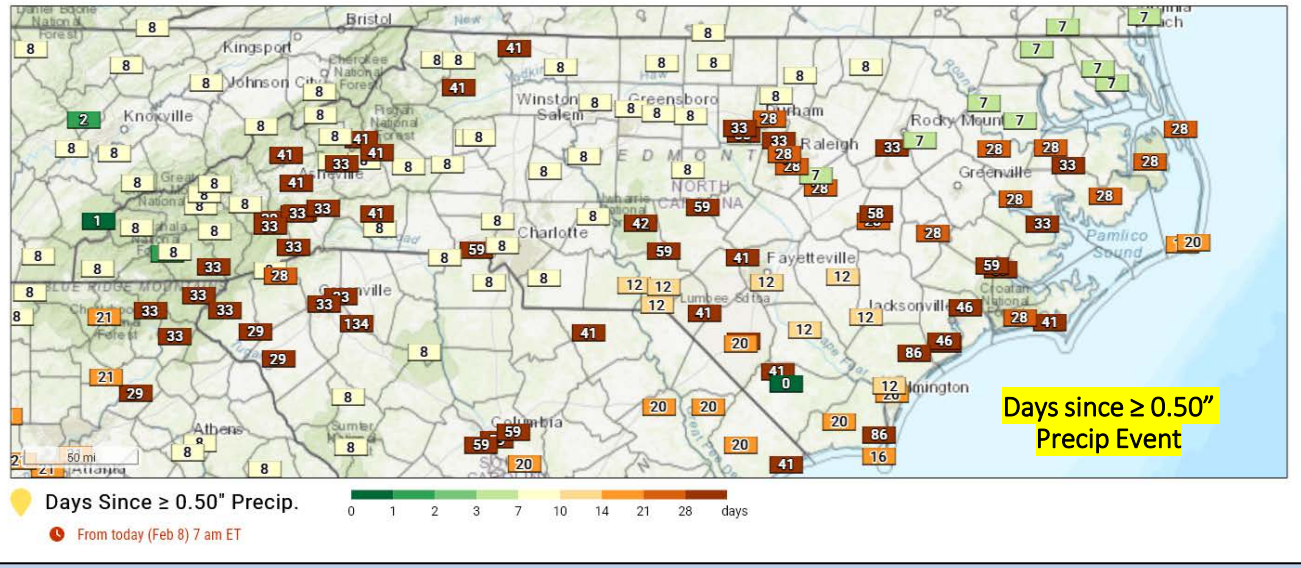
From: https://climatetoolbox.org/tool/Climate-Mapper , 100-hr Map Link

Observed Precipitation

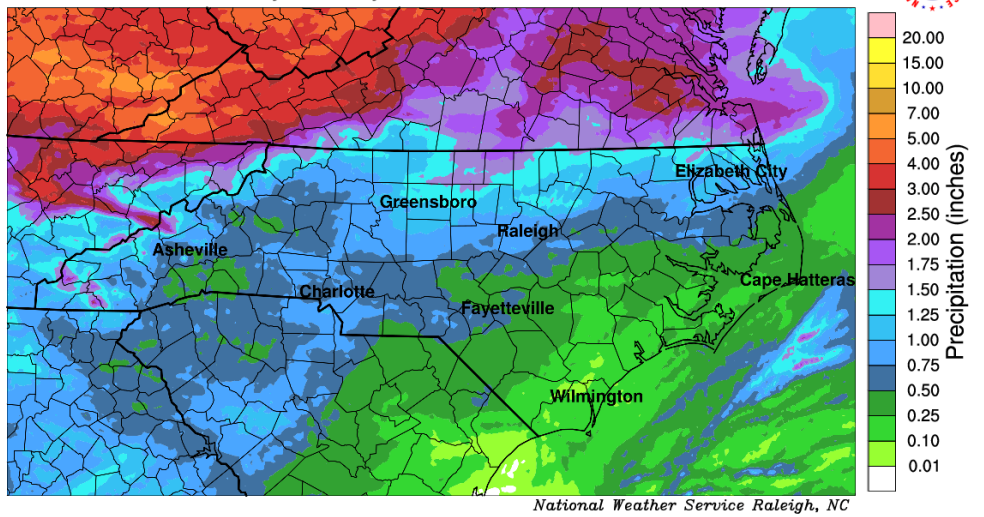
From the Fire Weather Intelligence Portal • *climate.ncsu.edu/fwip*



From the Fire Weather Intelligence Portal • *climate.ncsu.edu/fwip*

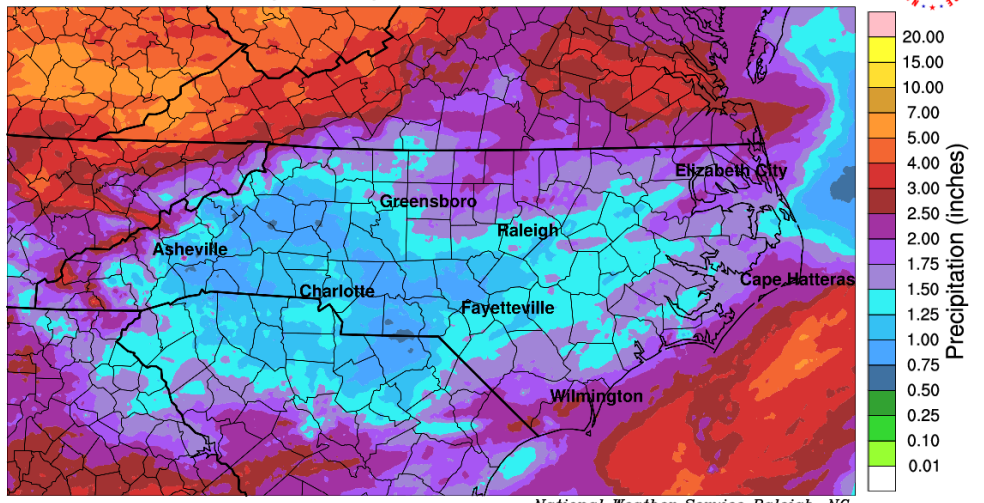


NWPS 14-Day Observed Precipitation
Valid: 7 AM EST Saturday February 08, 2025



National Weather Service Raleigh, NC

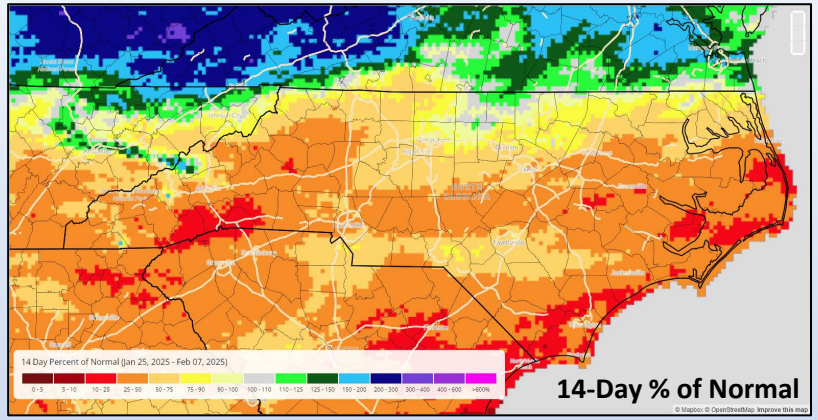
NWPS 30-Day Observed Precipitation
Valid: 7 AM EST Saturday February 08, 2025

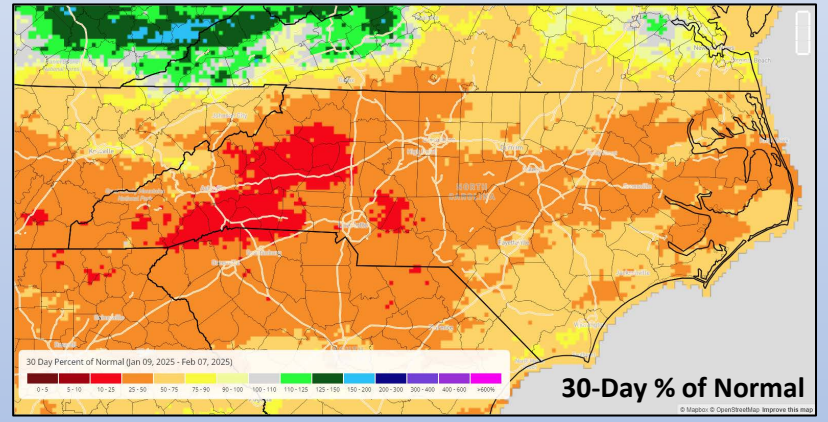


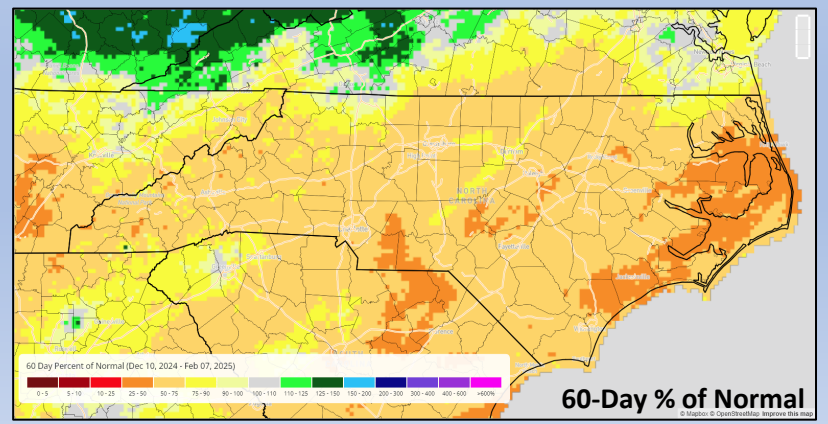
National Weather Service Raleigh, NC

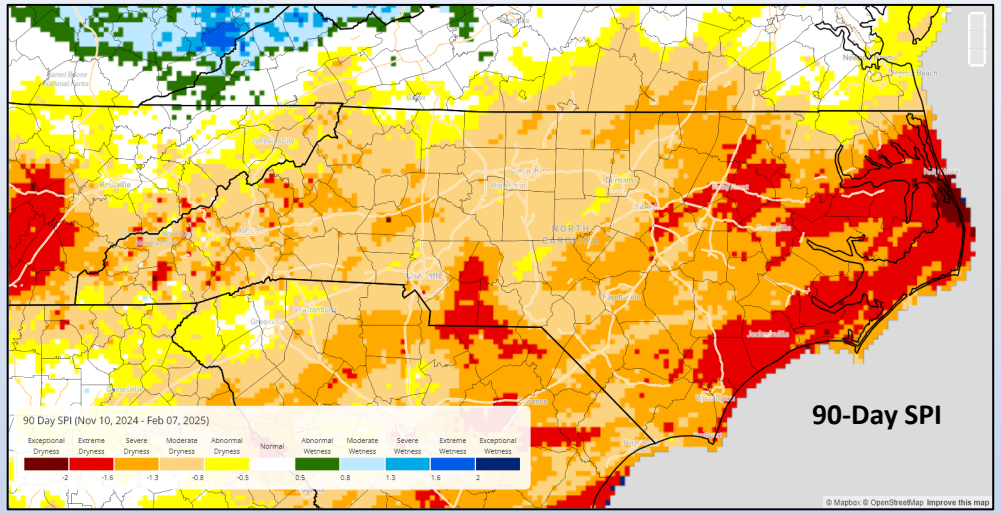
Comparing Observed Precip to 30-Yr Normals, *SRCC* *(Ending 2/7/25 am)*

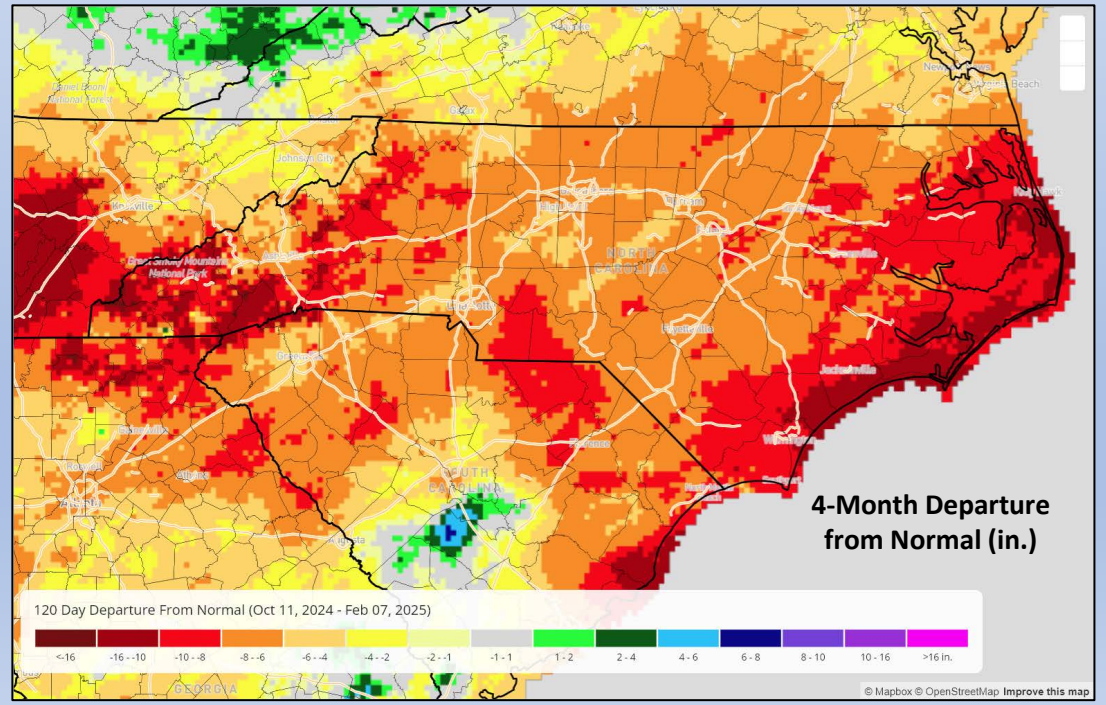
https://srcc.tamu.edu/water_portal/



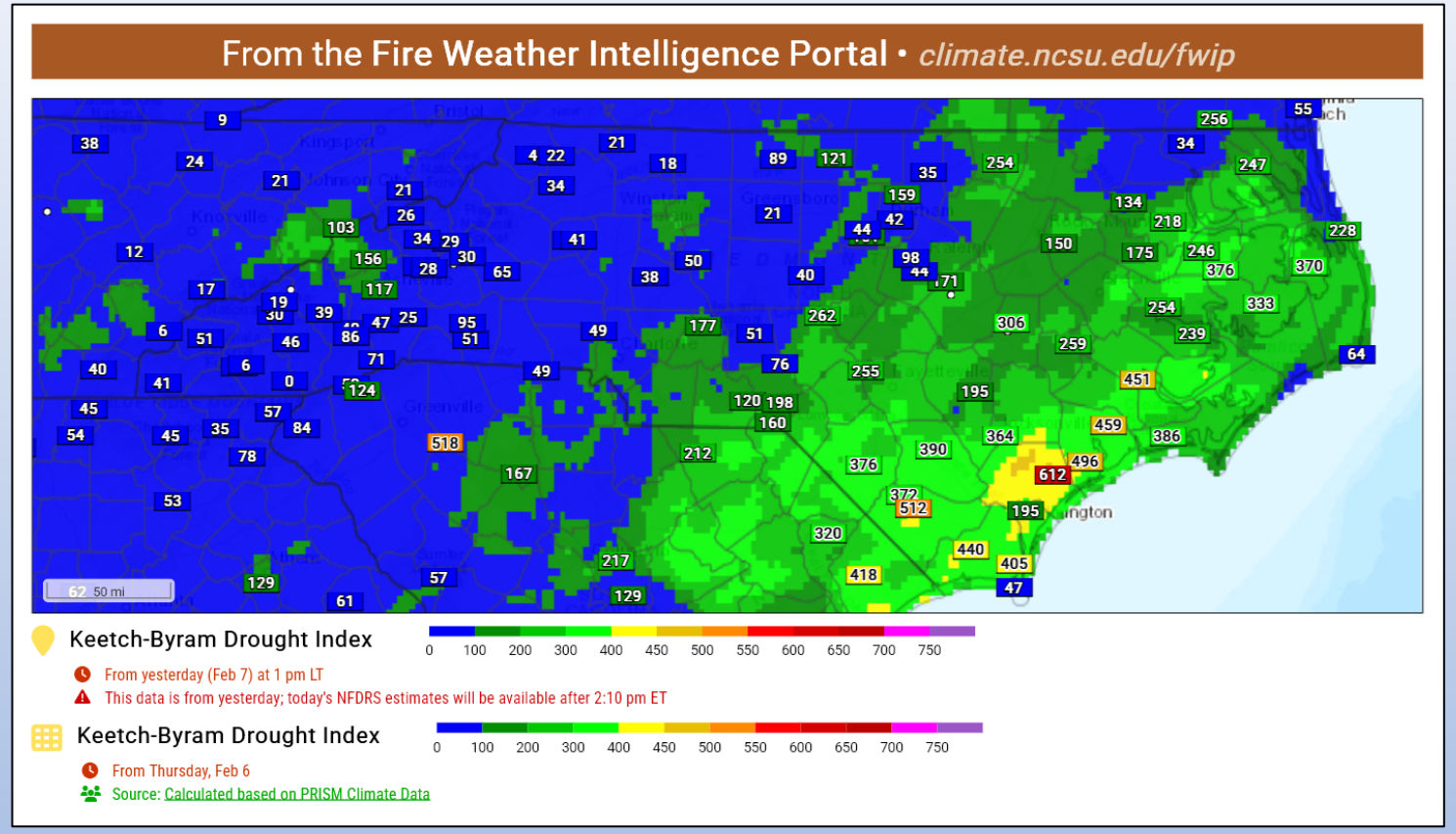








KBDI - Station Points *FWIP (Point calculation from WIMS @ 1300 on 2/7/25)*

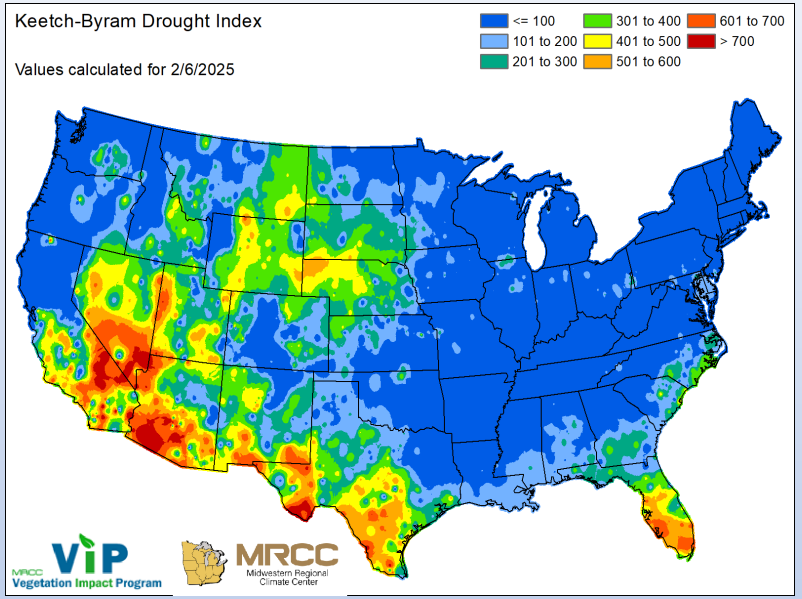


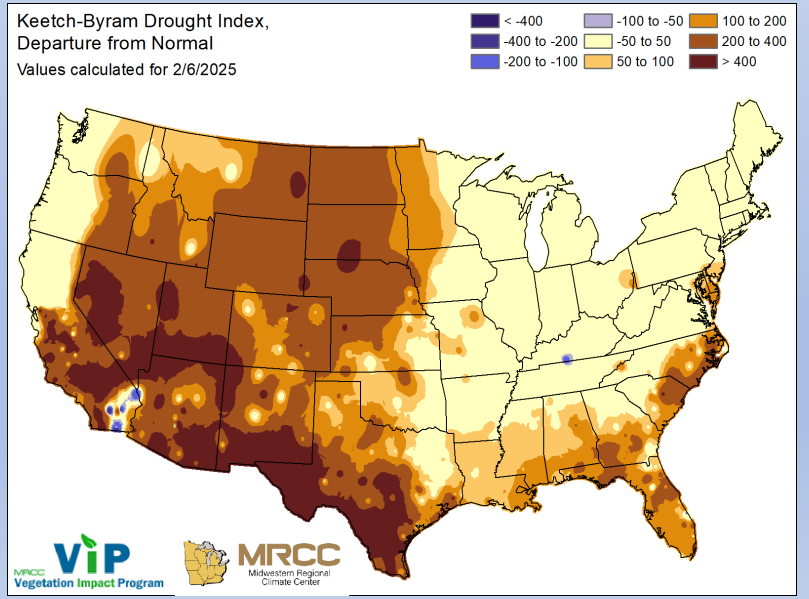
KBDI Interpretation: *Outputs tend to be more representative of the overall duff/upper soil layer condition during the warm season because the model uses daily maximum temperature and daily rainfall to move KBDI's daily increment (in a water balance context). The model requires > 0.20" of precip to cause a net daily decrease, as an assumption is the first 0.20" of precip is intercepted by vegetative canopy. The index range is 0-800 (8 inches of water divided into hundredths of inches), where 0 represents complete saturation of the litter/duff/upper soil profile, while 800 represents complete lack of plant available water. Localized critical values depend upon the Fire Danger Rating Area, general fire problem, use of artificial drainage, and how much runoff generally occurs.*

KBDI responds rapidly to rainfall additions during colder weather with minimal daily increases during dry/cold days. Hydrological drought metrics on the other hand operate on longer time scales. It is important to understand the general difference between the two and how they compliment each other relating to the overall fire environment.

Original Paper on KBDI: https://www.srs.fs.usda.gov/pubs/rp/rp_se038.pdf

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



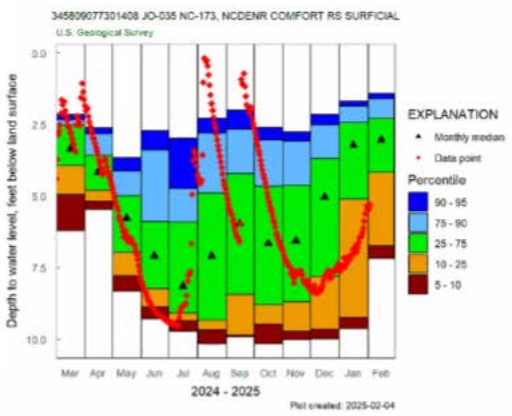


General Statewide Streamflow & Surficial Groundwater Well Monitoring at Coast

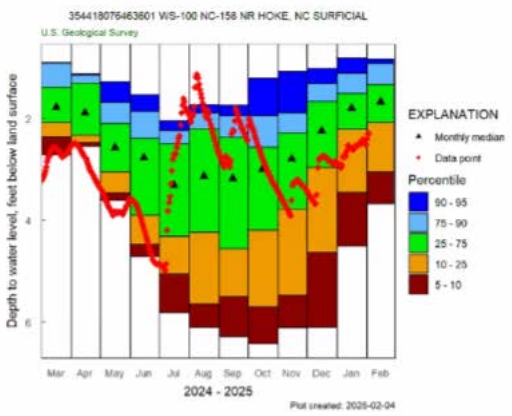
Coastal Plain

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

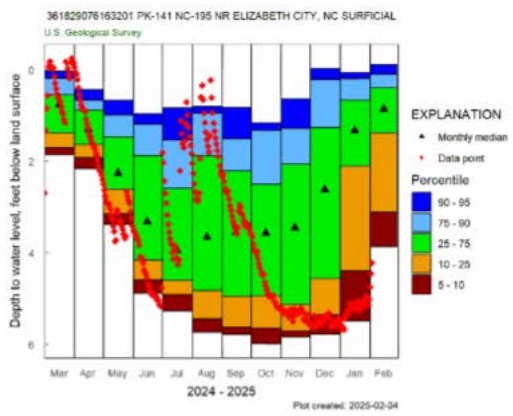
Comfort (Jones Co.)



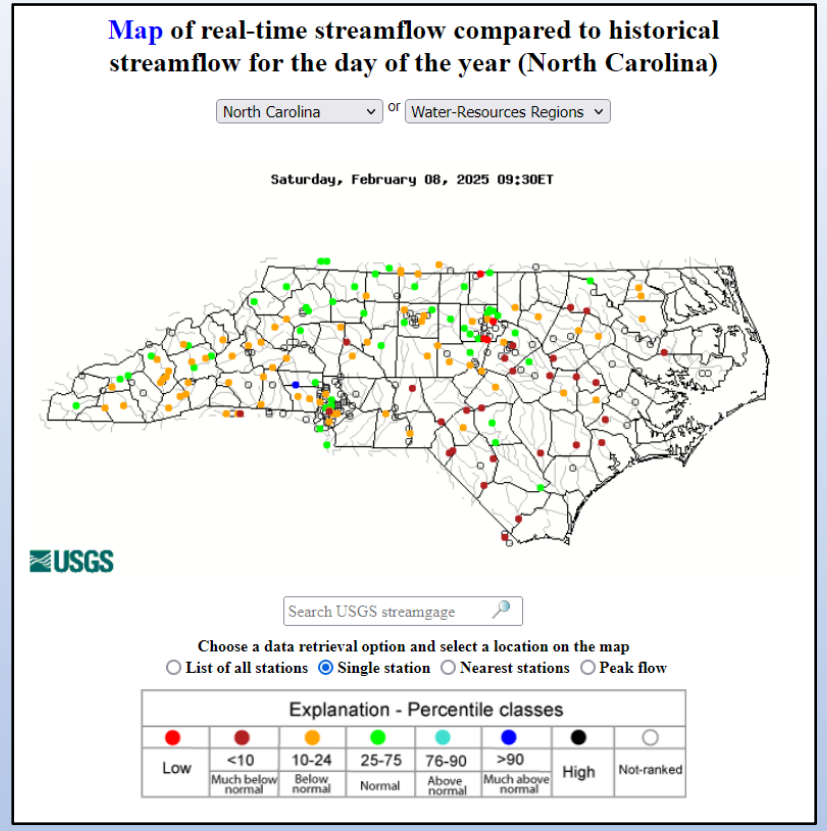
Hoke (Washington Co.)



Elizabeth City (Pasquotank Co.)



USGS
science for a changing world

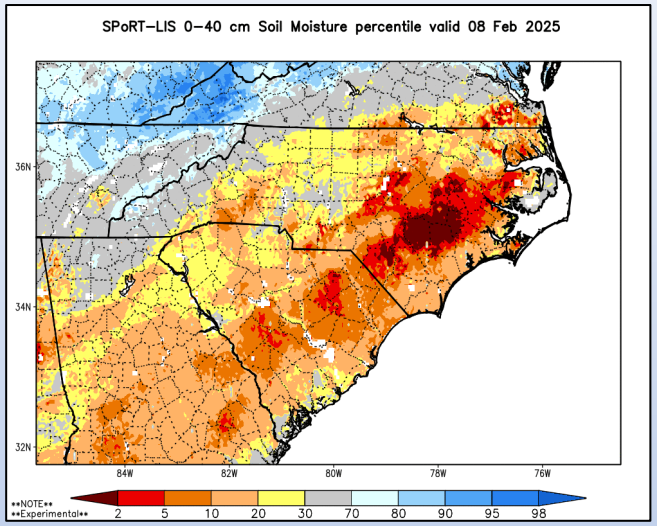


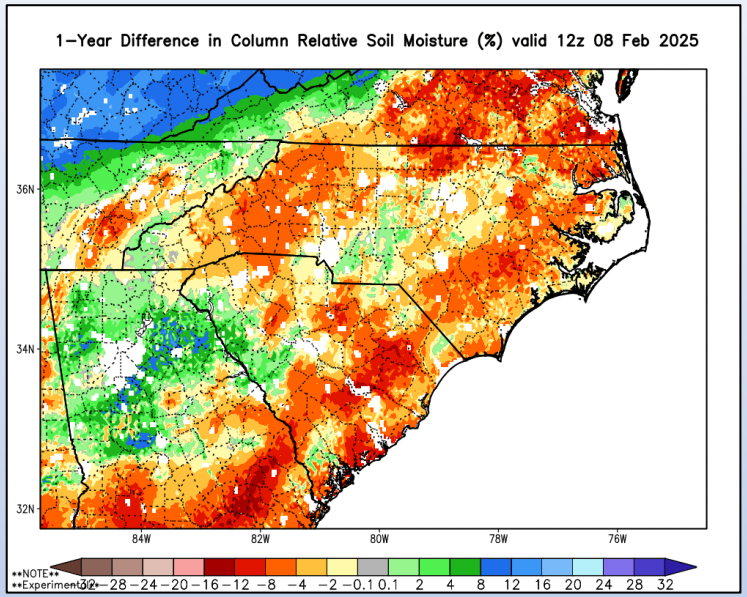
Source: https://waterwatch.usgs.gov/index.php?m=pa07d&r=nc&w=map

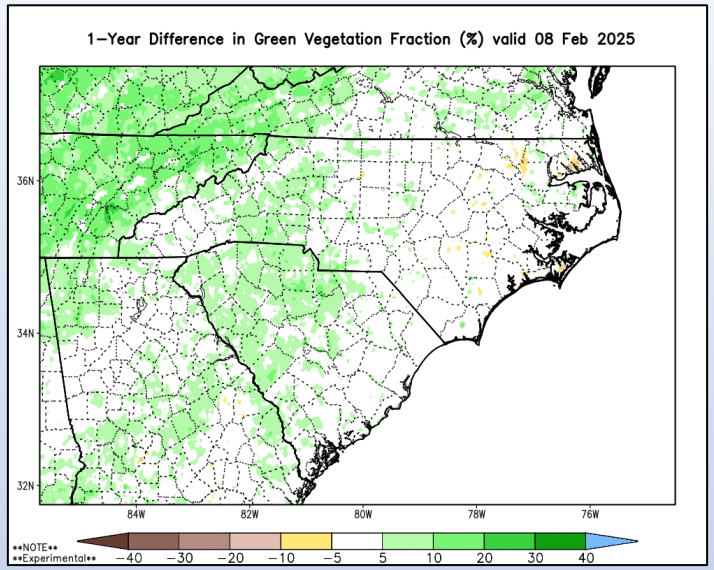
- Gauged streamflow continues a slow decline over more the state, as compared to last month.
- Three Coastal Plain monitoring wells – note that Elizabeth City continues to run near record minimum for the month.

SPoRT Modeled Relative Soil Moisture & GVF

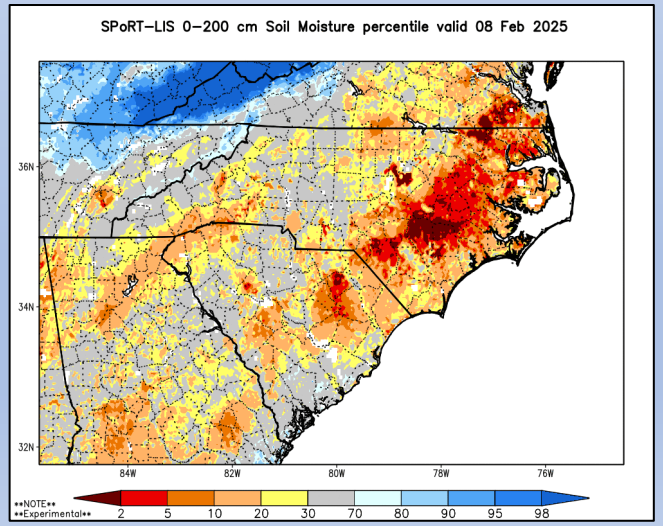
0-40 cm Depth



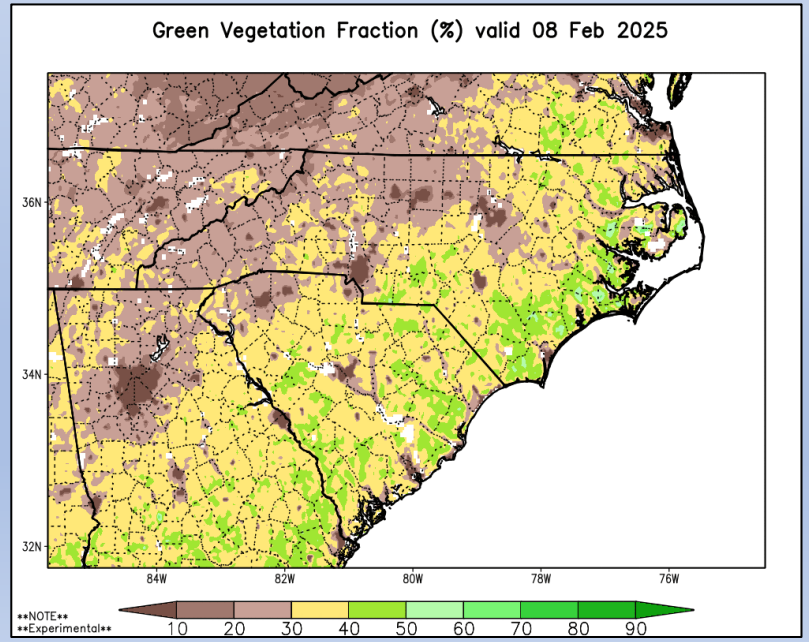




0-200 cm Depth



- See areas of **modeled** improvement & degradation near the surface and for the entire soil profile (left).
- The **"1-Year"** Soil Moisture Difference map shows modeled increases in dryness for much of NC, as compared to last year this time (center).
- The Green Vegetation "1-Year Difference" map (top right) can provide useful context for various drought, insect/disease/damage, seasonality & agricultural crop influences on the landscape as compared to the "Current GVF" map (right).



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

Significant Wildland Fire Potential Outlook:

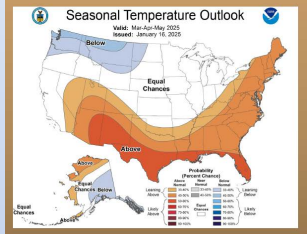
Updated 2/3/25 – Next Update on 3/3/25

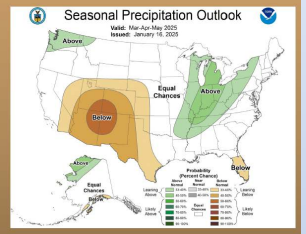
Slides for Context from SA Fire Environment February Seasonal Update (2/7/25)

Late February and Early March

- May be setting up another period of anomalous cold in late February and early March, timing is uncertain
- If or when Arctic air returns:
  - less fog
  - more opportunities for quick drying of leaf litter and freeze-cured fuels
  - Suppressed storm track that could bring rain to the Gulf Coast, but this is very uncertain
- Repeat of January unlikely, but a 1-to-2-week period of cold conditions is possible
  - Slowing or reversal of green-up in some areas

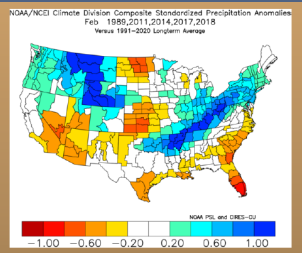
March through May from NOAA

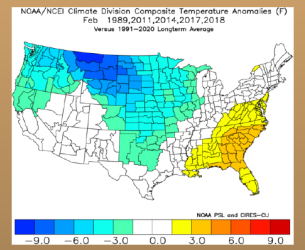


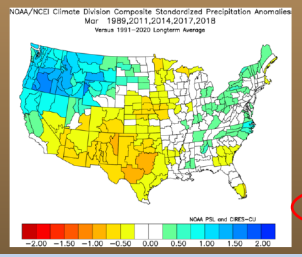


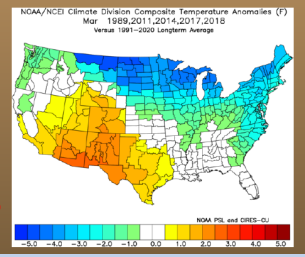
- La Niña the main influence through spring, even if we go neutral
- Fire concerns highest in the Plains and coastal Southeast, in addition to hurricane-/bug-/ice-damaged areas

Analogs for February and March









1989 – February a close match so far

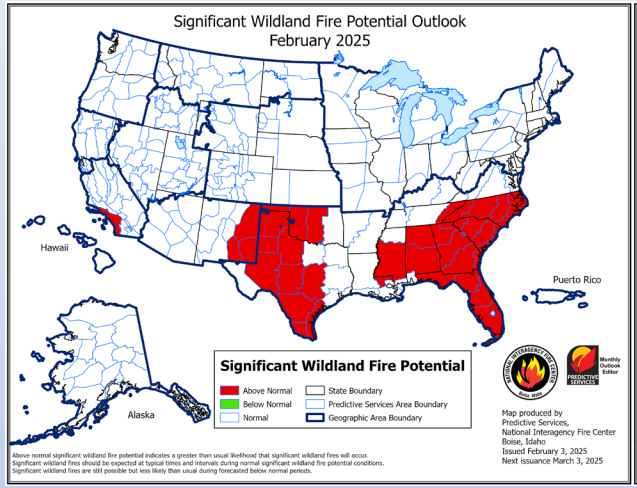
2011 – January eerily similar

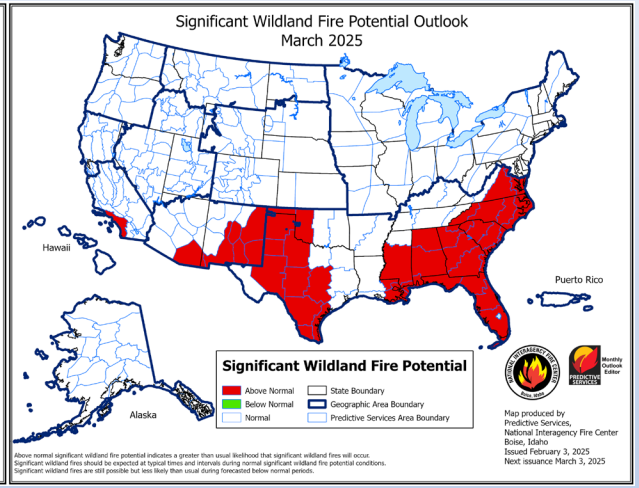
2014 – abnormally cold into spring (warm S FL and W TX); ENSO neutral

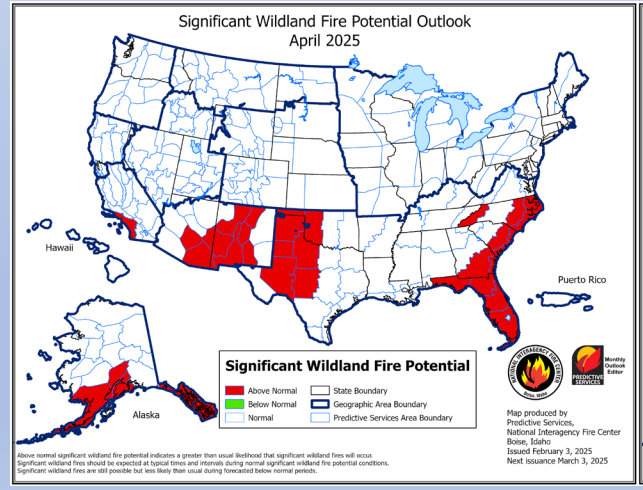
2017 – ENSO transition similar but wall-to-wall warmth

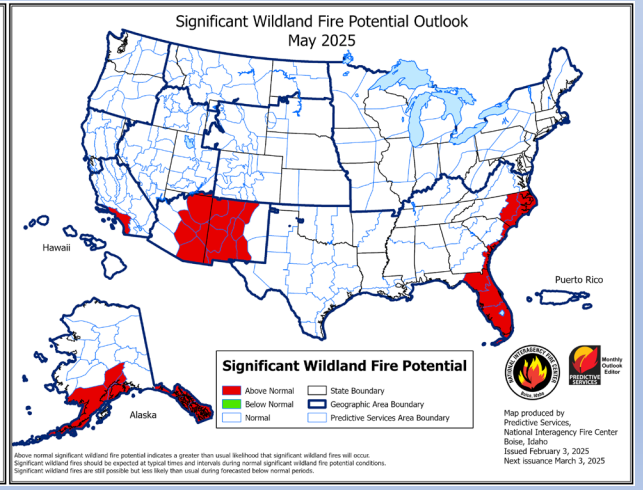
2018 – similar late-peaking La Nina, similar cold Jan, record warm Feb SE and then periods of cold March and April after a major SSW

All analogs weak









**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 this year.*