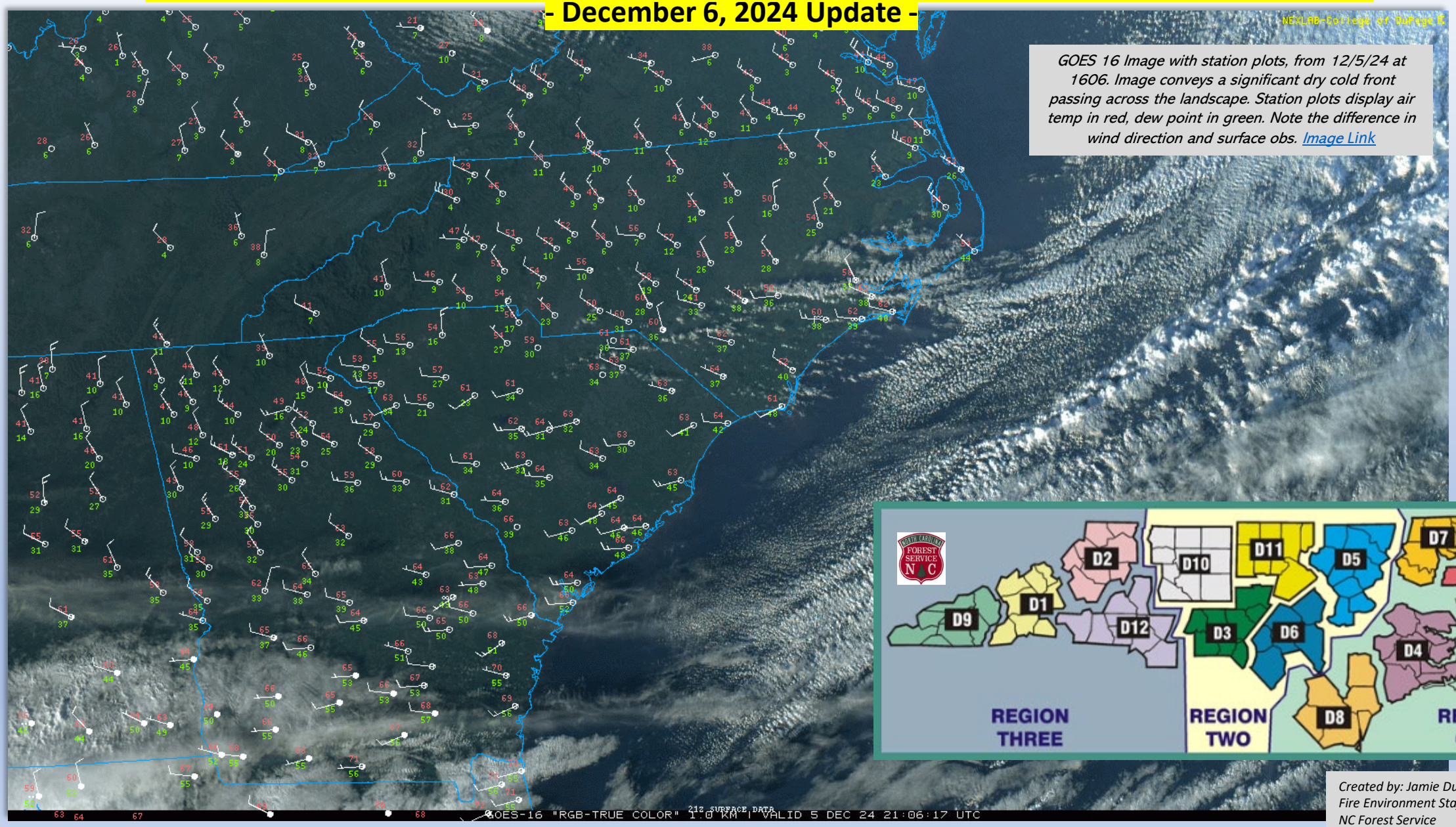
Statewide Seasonal Fire Danger Assessment

- December 6, 2024 Update -



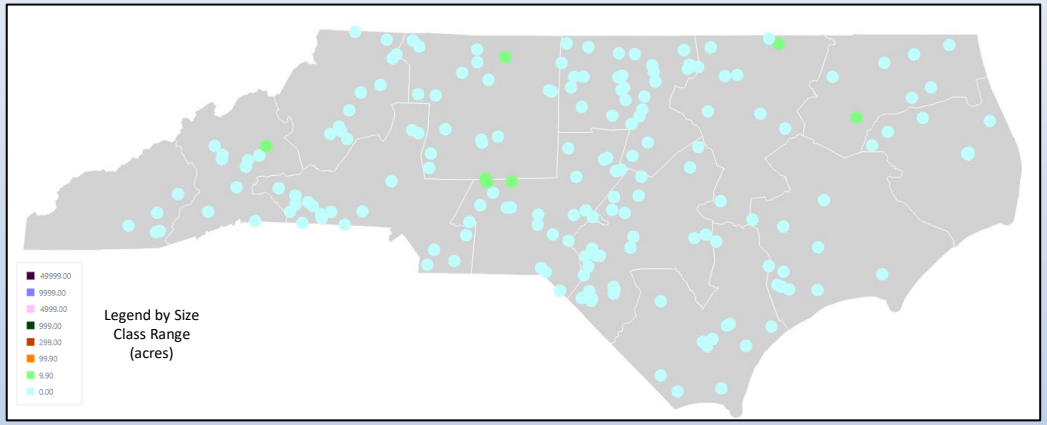
GOES 16 Image with station plots, from 12/5/24 at 1606. Image conveys a significant dry cold front passing across the landscape. Station plots display air temp in red, dew point in green. Note the difference in wind direction and surface obs. Image Link

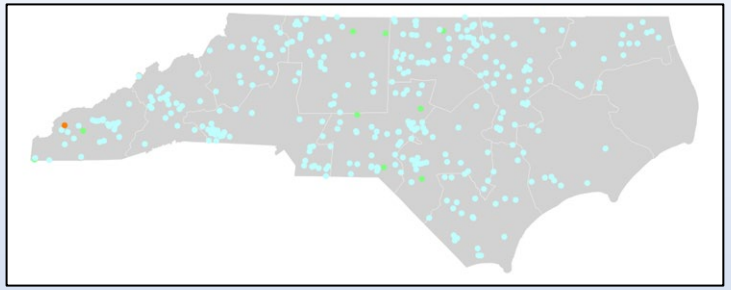
Created by: Jamie Dunbar
Fire Environment Staff Forester
NC Forest Service

Incident Activity

November 1 - 30

fiResponse Incident Location Map (for general context, preliminary data)
7-Day Activity: 11/29 – 12/5, 2024
Report: Business Intelligence Module, Response Trends Map





NCFS – By Region				
MTD Fire Activity (Does Not Include Federal Ownerships)				
Data Source:	Signal 14 Regional Activity Summary Report (Signal 14 is a daily snapshot in time)			
Date Range:	12/1 – 12/5, 2024			
Area	Wildfire Count	Wildfire Acres	RX Count (State & Private)	RX Acres (State & Private)
R1	35	46.4	2	26
R2	77	157.7	7	519
R3	35	76.3	0	0

**This data does not include other entirely "federal" fires such as two significant wildfires that occurred in District-4 on DOD/USMC Camp Lejeune yesterday, 12/5/24 for approximately 2,200 acres.*

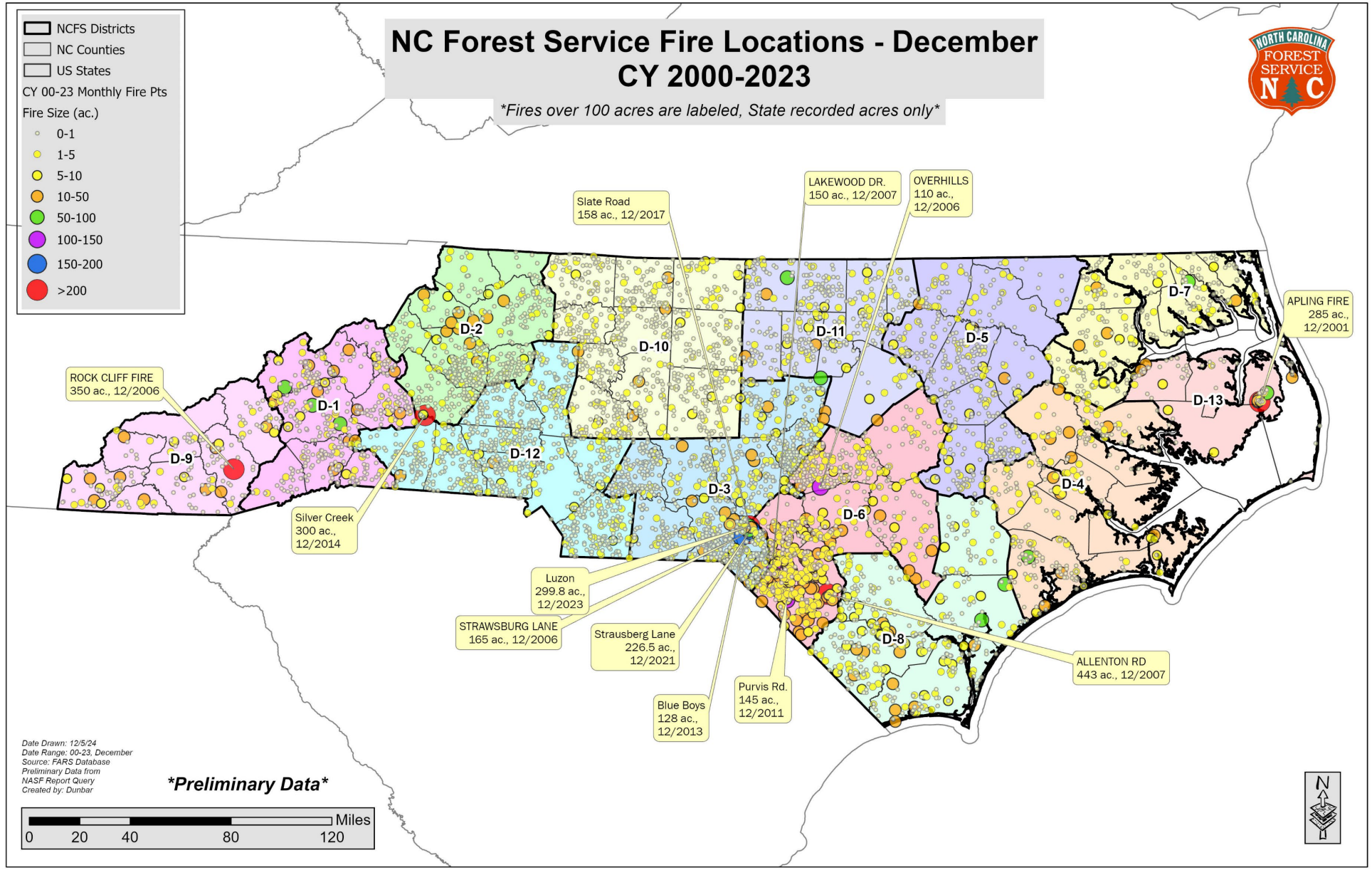
Statewide Context

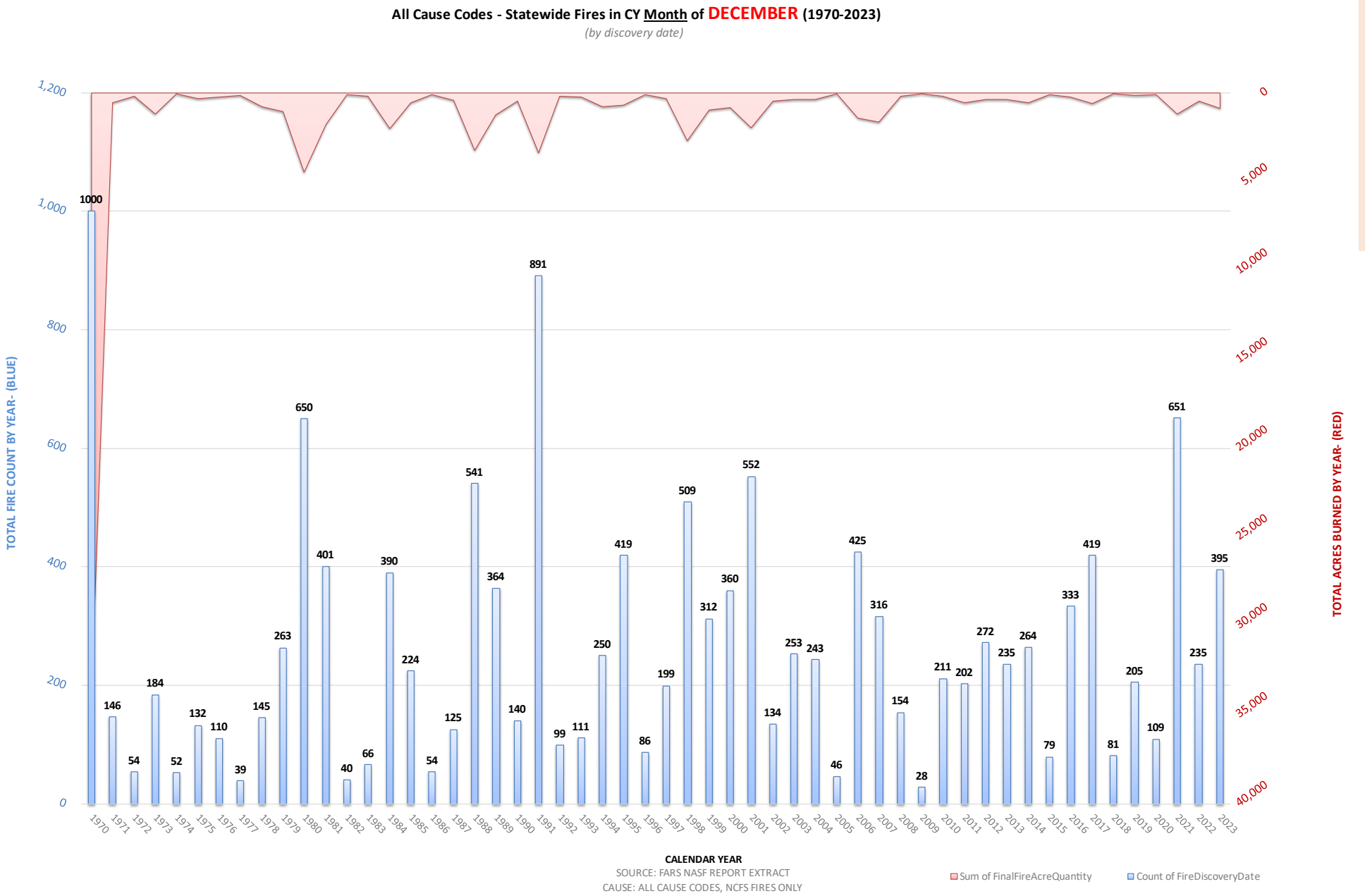
January: 10-yr avg is 326 fires for 524 acres
February: 10-yr avg is 576 fires for 1,494 acres
March: 10-yr avg is 913 fires for 4,727 acres
April: 10-yr avg is 659 fires for 6,481 acres
May: 10-yr avg is 317 fires for 1,241 acres
June: 10-yr avg is 221 fires for 2,408 acres
July: 10-yr avg is 183 fires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

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

Largest incidents last **7-Days** (Ending 12/5):
from fiResponse & preliminary reporting only

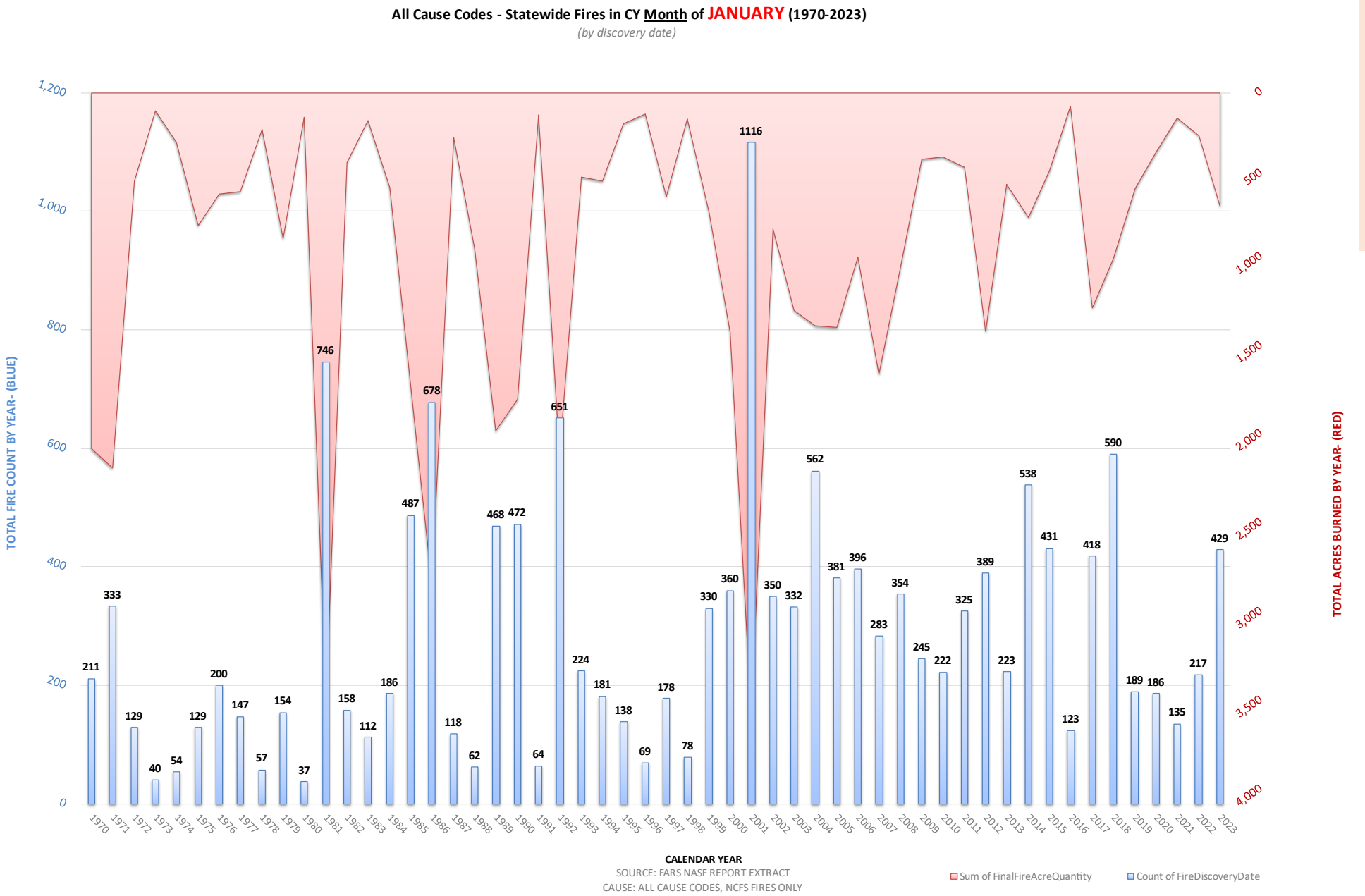
Incident Name	Discovery Date	Region	District	County	Acres
NCCAR	12/5/2024	Region 2	District 5	Northampton County	69.00
Poison Fork	11/30/2024	Region 2	District 3	Montgomery County	58.00
Buck Creek	12/5/2024	Region 3	District 1	McDowell County	50.00
Rowan County - Badin	12/5/2024	Region 2	District 10	Rowan County	43.00
Tuckertown #2	12/5/2024	Region 2	District 3	Stanly County	42.00
Three Ponds Fire	11/30/2024	Region 2	District 10	Rockingham County	15.00
Tuckertown #3	12/5/2024	Region 2	District 3	Stanly County	12.00
Cooper Hill Grill	12/5/2024	Region 1	District 7	Bertie County	10.00
Carteret Farm	12/5/2024	Region 1	District 4	Carteret County	9.00
Lakewood Falls Shore	12/2/2024	Region 2	District 3	Chatham County	7.50
SP Long Road	12/5/2024	Region 1	District 8	Columbus County	6.30
Newberry	12/5/2024	Region 3	District 1	McDowell County	6.00
Little trail	12/5/2024	Region 1	District 8	Brunswick County	5.00


NC Forest Service Fire Locations - December
CY 2000-2023
Fires over 100 acres are labeled, State recorded acres only
NCFS Districts
NC Counties
US States
CY 00-23 Monthly Fire Pts
Fire Size (ac.)
0-1
1-5
5-10
10-50
50-100
100-150
150-200
>200
Slate Road
158 ac., 12/2017
LAKEWOOD DR.
150 ac., 12/2007
OVERHILLS
110 ac.,
12/2006
APLING FIRE
285 ac.,
12/2001
ROCK CLIFF FIRE
350 ac., 12/2006
Silver Creek
300 ac.,
12/2014
Luzon
299.8 ac.,
12/2023
STRAWSBURG LANE
165 ac., 12/2006
Strausberg Lane
226.5 ac.,
12/2021
Blue Boys
128 ac.,
12/2013
Purvis Rd.
145 ac.,
12/2011
ALLENTON RD
443 ac., 12/2007
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: 12/5/24
Date Range: 00-23, December
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 DECEMBER
from 1970 - 2023

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



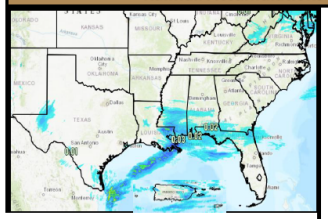
Distribution of
All Fires & Acres
for JANUARY
from 1970 - 2023

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

SACC Daily Outlook

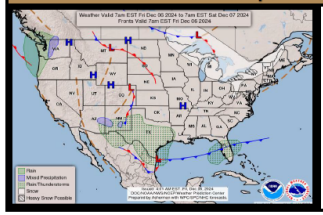
Friday, December 6, 2024

Rainfall Accumulations for the Past 24 Hours



- Most of the Southern Area has remained dry.
- Some light showers did occur over south and west Texas, Virginia, North Florida, Louisiana, Georgia, Puerto Rico, and the southern areas of Mississippi, Alabama.
- Most of the accumulations were less than a tenth of and inch.
- East Louisiana reported amounts of around one half inch, with radar estimated amounts of up to an inch and one half in areas with no observations.
- Other localized amounts of up to a quarter inch are estimated.

Today's Weather Outlook



- High pressure is forecast to control the weather today for a large portion of the Southern Area today, keeping the weather quiet.
- Moisture is forecast to wrap around the west side of the high, pushing in over TX.
- With a low-pressure system to the south of TX, it should cause enough instability over TX to allow for a potential of showers and storms today.
- A cold front over Central FL is forecast to push south today, keeping a potential for showers and storms over the FL peninsula today, pushing south tomorrow.
- The low-pressure system to the south of TX is forecast to slowly move north, along the TX coast, keeping showers and storms over the area, as well as spreading the potential to the east over the weekend.

Watches, Warnings and Advisories as of 8 am This Morning

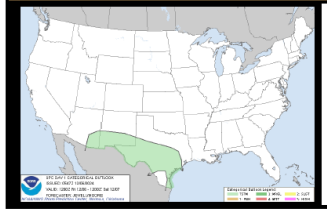
- **Red Flag Warnings/Fire Weather Watch:** None.
- **Severe Weather Watches/Warnings:** None.
- **Tropical Weather Watches/Warnings:** None.
- **High Wind Warnings:** None.
- **Winter Weather Advisories/Watches/Warnings:** None.

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

SACC Daily Outlook

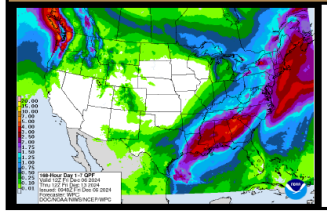
Friday, December 6, 2024

Severe Weather Outlook from the Storm Prediction Center for Today



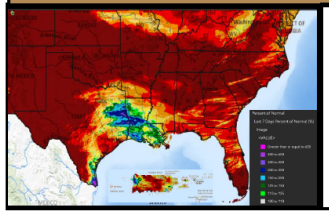
- The Storm Prediction Center has no areas of organized severe thunderstorms forecast for today.
- While thunderstorms are forecast over Texas tomorrow, and then East Texas and the Mississippi Valley on Sunday, no organized severe thunderstorms are forecast through the beginning of next week,

Forecast Rainfall Accumulations for the Next 7 Days



- Today and tomorrow have the potential for precipitation of light precipitation for TX and the Mississippi Valley.
- The potential increases Sunday as the low moves north and slowly strengthens, precipitation amounts are forecast to increase over the Mississippi Valley, and spread east, over TN and the Ohio River Valley.
- The system is forecast to progress eastward, spreading the showers east and increasing in coverage, with the total amounts of over 5 inches possible from LA to the northeast, along the Atlantic coast.

Percent of Normal for the Last 7 Days



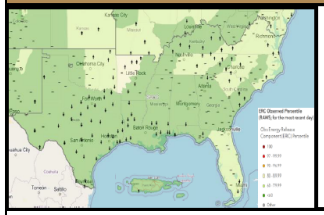
- The last 7 days have seen dry conditions continuing for the Southern Area, with almost the Southern Area seeing less than 5% of normal.
- East TX, the very tip of South TX, and LA, and a small area of NE Puerto Rico showing near to above normal accumulations.

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

SACC Daily Outlook

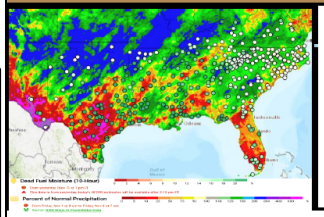
Friday, December 6, 2024

Observed ERC



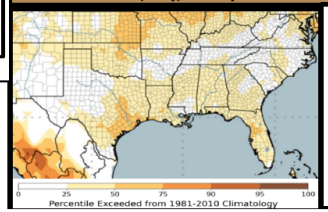
- ERC's are below the 60th percentile for most of the Southern Area.
- NE FL, the FL peninsula, Central and East OK, the western half of SC, Central and E TN, and a large portion of NC are between the 60th and 80th percentiles.
- W AR is reporting ERCs between the 80th and 90th percentiles.
- For the next 3 days, ERCs are forecast to:
  - Decrease for most areas west of the MS River
  - Increase for portions of the area east of the MS River.

Observed 10 Hour Dead Fuel Moisture with the KBDI



- Much of the Southern Area has reported dead fuel moistures of over 15%.
- The Carolinas, VA, KY Mts, W AR, OK, the TX Panhandle, and the west TX Mts are showing fuel moistures from 10%-15%.
- KBDI remains highest in West and South Texas, with Central TX now included, where KBDIs are above 700.
  - Other areas scattered across the area are above 500.
  - Other areas, mainly in OK, AR, N TX, TN, GA, VA, KY, and the Carolinas, and other smaller areas showing KBDIs of below 300.

Hot, Dry, Windy Max GEFS HDWI Forecast Percentiles



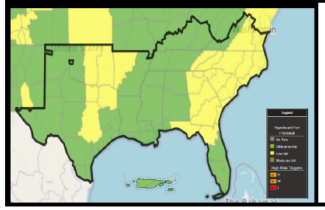
- Most of the Southern Area is below the 50 percentiles
- The TX coast and adjacent inland areas, northeast OK, and north Central FL are showing to be in the 50th to 75th percentiles.
- Tomorrow shows the index to be in the 50-75th percentile range for NE AR.
- Sunday, most of the western half of TX is forecast to be in the 50-75th percentile range, with the west TX Mts above the 90th percentile.

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

SACC Daily Outlook

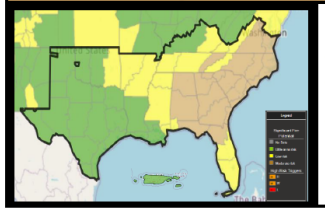
Friday, December 6, 2024

Significant Potential for Today



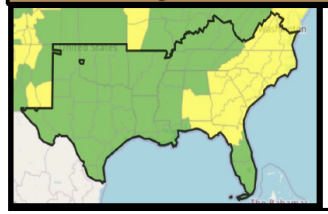
- **High Risk:** None.
- **Moderate Risk:** None.
- **Low Risk:** East TX north, southeast Central TX, Central and east OK, W AR, North FL, GA, SC, TN Mts, NC, and Central and Coastal VA for low RH and dry conditions.

Significant Fire Potential for Tomorrow



- **High Risk:** None.
- **Moderate Risk:** AL, GA, North FL, SC, NC, TN Mts, and VA for very low RH and dry fuels.
- **Low Risk:** Mississippi, East OK, AR, TN, KY Mts, AL, GA, FL peninsula, NC Mts, and the VA Mts for low RH and dry conditions.

Significant Fire Potential Outlook for Sunday



- **High Risk:** None.
- **Moderate Risk:** None.
- **Low Risk:** South AL, north FL, GA, SC, NC, and VA for low RH and dry conditions.

National 7-Day Significant Fire Potential Outlook

Southern Area Daily Outlook Page:

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

Product provides weekly context for Southern Area (Friday - 12/6 Outlook shown) & is typically updated daily during high SA Planning Levels.

Fuels & Fire Danger

Drought conditions have continued to expand across much of the state over the past month. Rainfall since TS Helene has remained limited, with many areas between 2-3 weeks since a ≥ 0.50" rainfall event. The map to the middle-right indicates majority of the state is ≤ 25% of normal for precip at 2-weeks.

The lack of rain and/or significant snow is also helping keep fallen hardwood leaves uncompacted for many areas, making them more receptive to rapid drying, heat transfer and lofting.

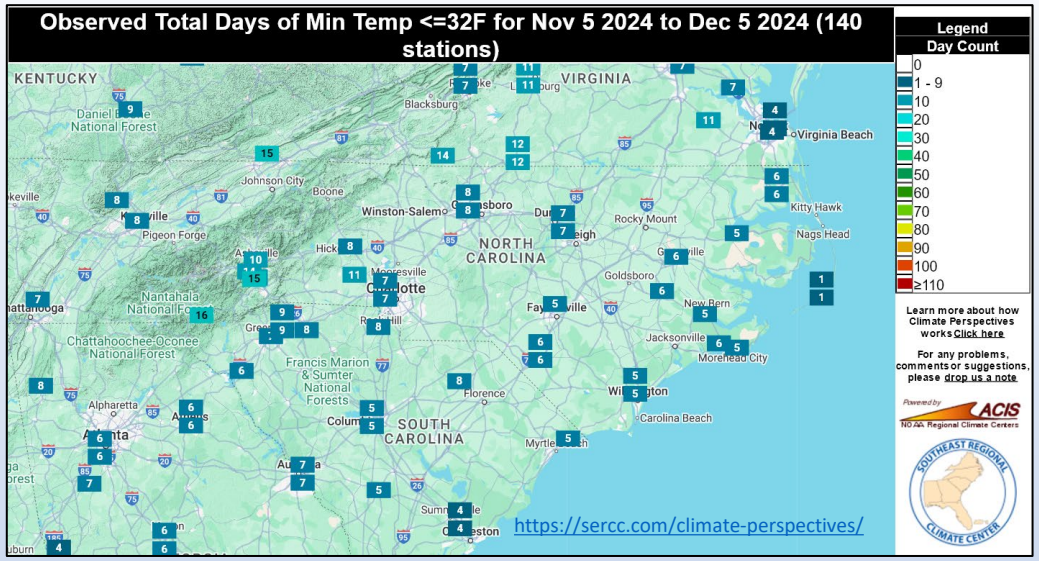
Duff & upper organic soil consumption has also been noted more frequently in coastal districts, corresponding with the abnormally high KBDI value areas represented on slide #44. These cumulative drought related impacts are leading to enhanced difficulty of control/mop-up & later reburn risk. Canal networks and swamp systems are significantly drier than normal in these areas. Normal "natural barriers" may not be effective based on drought and storm related loading impacts. The photo on the bottom right is from District 8 (South Coast FDRA), with water normally 2-4 feet above the photographed levels for this time of year. This will become very problematic in the Spring of 2025, should lack of significant rain continue.

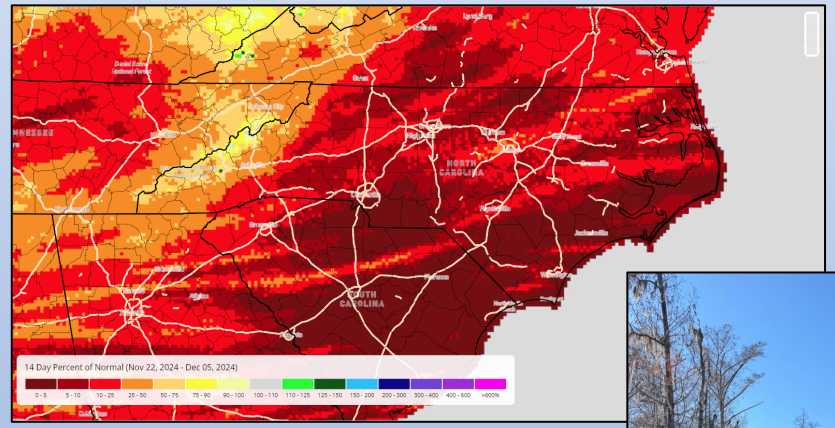
It is also important to note the risk of prescribed fire reburn & mop-up concerns in drought impacted areas, aligning with deep duff/abnormally heavy fuel loading/organic soils that are available for consumption. Smoldering fires in such locations can easily "sleep" until weather conditions align (warmth, wind, low dead/dormant fuel moistures), sometimes weeks later.

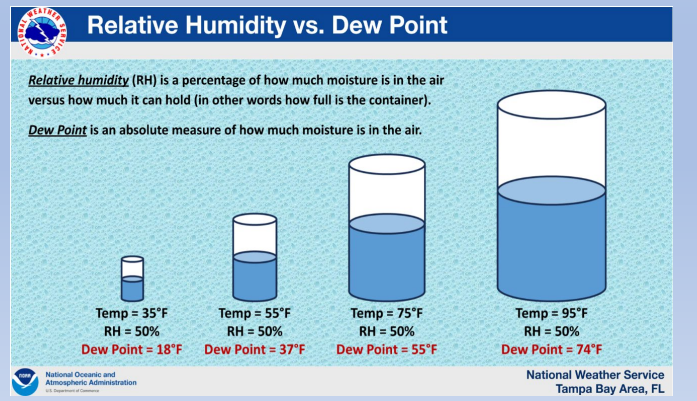
Live Fuels/Greenness - the recent repeated rounds of below freezing minimum temperatures across the state have pushed most species (non-cold hardy) to cured or dormant moisture conditions. See top graphic related to minimum temps for the past month. The additional fuel availability is normally tempered by shorter day lengths (less solar heating) and cold overnight temperatures in December. However, during periods of enhanced fire weather with receptive fuels (enhanced by abnormally high air temps/storm & drought loading, etc.) expect more significant/atypical fire behavior.

Very dry & cold air has returned to the state after November averaged much warmer than normal. The return of very dry air will quickly cause small to medium sized dead fuels to dry out, especially where repeated poor overnight recovery happens. Be watchful for situations where consecutive days of dry air aligns with increasing air temps, vegetative dormancy, wind and heavy loading of drying storm debris as we progress into winter. Dew point temperatures are in the single digits to low teens at the time of this report.

See NWS slide snip to the right that illustrates the concept of available "container" size & moisture content related to dew point at the same relative humidity, but different air temperatures.







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 **Dec. 3, 2024**

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

The Main Takeaway

Moderate Drought (D1) has expanded across most of the state, including in western areas that were dealing with flooding from Helene just over two months ago.

This Week's Summary

Despite rain showers on Thanksgiving morning and light snow this Tuesday, most areas had less than a quarter-inch of liquid precipitation all week, which wrapped up back to back dry months statewide. That prolonged dryness has finally caused streamflow levels to fall below normal in all three regions of the state.

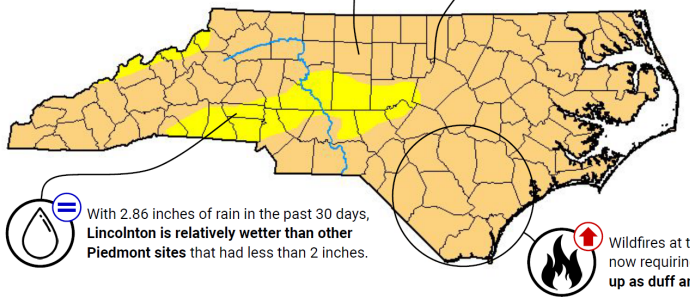
Snow Drought Update

With 0.4 inches of snow Tuesday, **Greensboro**'s snow-free streak ended after 1,038 days. **Charlotte** had only a trace, so it has now been 1,040 days and still counting since the last measurable snow on January 29, 2022.

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

Streamflows in the northern Piedmont have fallen steadily since mid-November, with **Buffalo Creek at its historical 6th percentile** over the past week.

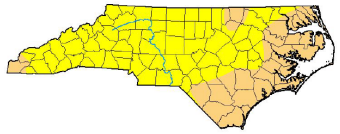
Falls Lake is a half-foot below its target, but is now able to hold onto more water by **using its piggyback gates to make downstream releases**.



With 2.86 inches of rain in the past 30 days, **Lincolnton is relatively wetter than other Piedmont sites** that had less than 2 inches.

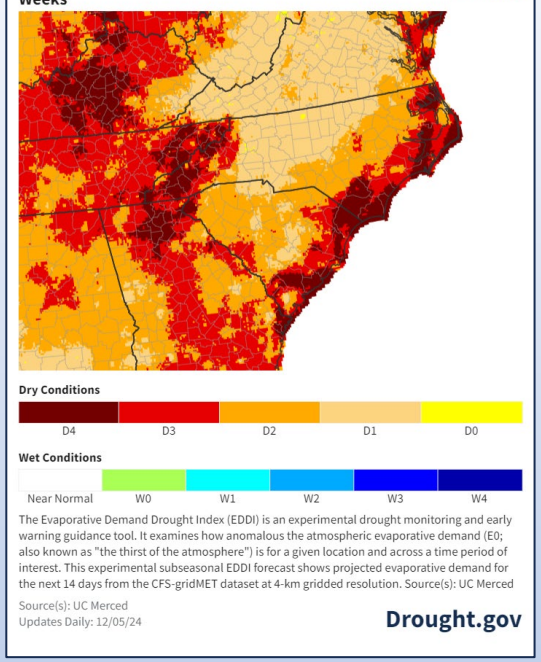
Wildfires at the southern coast are now requiring **more extensive mop-up as duff and organic soils dry out**.

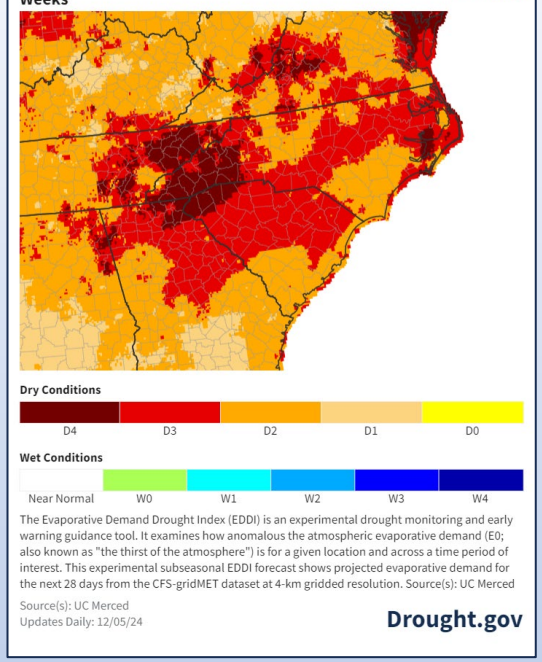
Last Week's Drought Status



Statewide Coverage by Category

Category	Current Coverage	Change Since Last Week
D0: Abnormally Dry	12.01%	-54.72%
D1: Moderate Drought	87.99%	+54.72%
D2: Severe Drought	0.00%	0.00%
D3: Extreme Drought	0.00%	0.00%
D4: Exceptional Drought	0.00%	0.00%



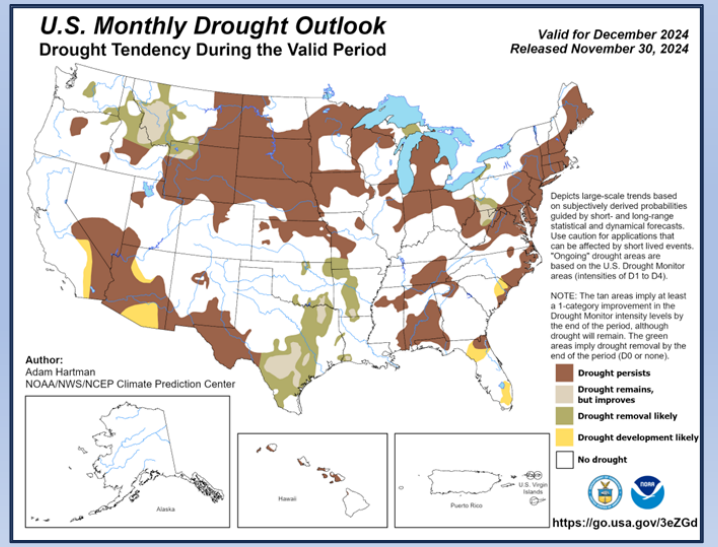


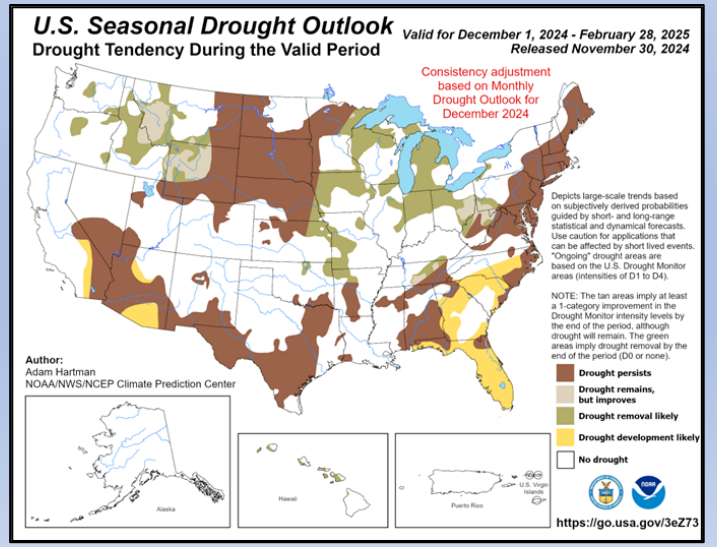
EDDI & Drought

EDDI Maps - The EDDI maps at the top right illustrate modeled evaporative demand at the two-week and four-week level. They represent enhanced drying potential as warmer/drier conditions are forecast to return.

US Drought Monitor – USDM map released last week, note extension of D0 and D1 last week (top left).

US Monthly & Seasonal Drought Outlook - released on 11/30/24, shown at right. See detailed state/regional discussions here. *All of this is dependent upon any future winter 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

12/6/24 Observations

Averages by FDRA

FDRA	STATION_COUNT	NFDR_DATE	BI	ERC	IC	SC	KBDI	1HR	10HR	100HR	1000HR	HRB	WOODY	TEMP	RH	WIND	PRECIP	DUR
Southern Highlands	3	2024-12-06	100.53 86.0%	38.67 85.4%	4.63 71.8%	53.83 88.6%	69.67	15.66 63.0%	13.88 13.1%	18.29 31.0%	23.82 93.9%	30.00	50.00	28.0°F	31.0%	WSW 5.0 mph	0.01 in.	0.7
Central Mountains	3	2024-12-06	125.03 95.5%	59.77 97.2%	7.97 84.5%	56.43 91.6%	308.33	12.01 35.9%	12.55 8.1%	16.98 19.3%	23.20 92.5%	30.00	50.00	33.3°F	31.3%	NW 4.0 mph	0.00 in.	0.0
Northern Highlands	2	2024-12-06	102.20 84.8%	41.70 85.0%	5.30 73.3%	53.95 85.4%	185.00	13.37 37.9%	12.58 9.2%	16.76 21.0%	23.20 91.2%	50.00	80.00	31.0°F	30.5%	WNW 7.5 mph	0.00 in.	0.0
Blue Ridge Escarpment	3	2024-12-06	114.23 86.9%	62.17 96.6%	8.70 76.9%	45.47 78.6%	303.67	11.27 37.1%	10.86 5.2%	14.21 3.5%	17.84 20.5%	30.00	56.67	36.7°F	25.3%	WNW 3.7 mph	0.00 in.	0.0
Western Piedmont	3	2024-12-06	121.97 90.9%	66.60 98.5%	10.27 78.4%	47.53 85.0%	277.33	10.70 43.9%	10.56 3.2%	16.35 17.5%	23.40 94.8%	30.00	50.00	38.7°F	26.3%	NNW 5.3 mph	0.00 in.	0.0
Sandhills	2	2024-12-06	41.65 66.3%	54.20 79.6%	8.10 49.8%	5.65 61.1%	374.00	10.77 46.1%	10.78 4.5%	16.68 25.7%	23.64 97.7%	40.00	65.00	38.7°F	31.0%	NNW 4.7 mph	0.00 in.	0.0
Eastern Piedmont	4	2024-12-06	114.00 79.5%	60.55 90.2%	8.55 58.9%	44.80 69.4%	287.25	11.36 39.1%	10.71 3.0%	16.64 22.6%	23.36 95.6%	30.00	60.00	37.0°F	35.3%	W 6.3 mph	0.00 in.	0.0
Southern Coastal	7	2024-12-06	85.64 70.0%	58.29 91.4%	8.11 66.0%	25.63 56.2%	456.71	10.45 22.6%	11.47 0.5%	17.53 30.4%	23.88 95.3%	50.00	90.00	42.6°F	29.1%	SE 3.6 mph	0.00 in.	0.0
Northern Coastal	4	2024-12-06	98.28 76.8%	58.48 92.5%	9.10 67.0%	33.88 63.3%	437.50	10.52 36.6%	10.84 0.5%	17.40 21.9%	22.99 91.6%	50.00	90.00	41.0°F	31.3%	S 6.3 mph	0.00 in.	0.0

Note impact of dry air on the 10-hr & 100-hr dead fuels.

IA fire activity is being impacted by cold fuel temperatures for now, note average air temps today at 1300 hrs. were ≤ 43*.

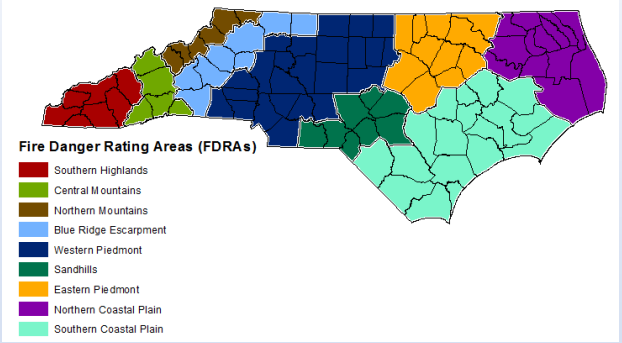
Important notes for next slide group:

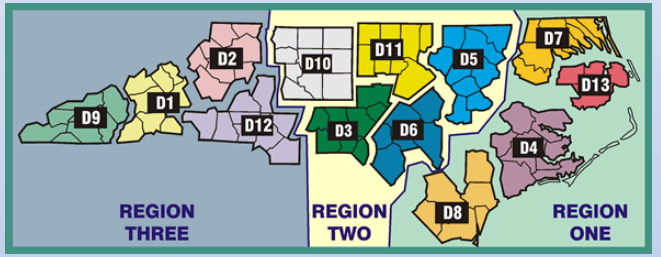
A. Current ERC, KBDI, GSI, 10-Hr, 100-Hr & 1000-Hr Graphics:

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

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

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





Tool Summary:

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

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

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

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

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

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

Other Notes:

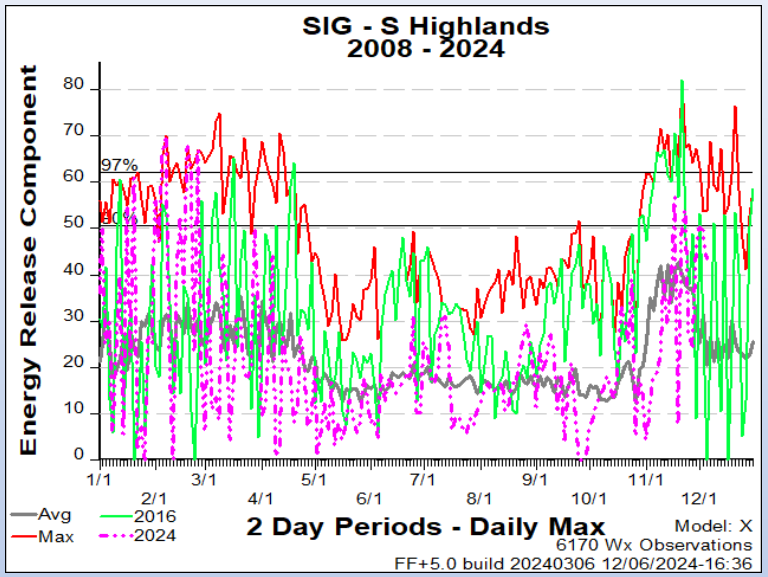
- Read the key and notes for each FDRA, included on the outlook matrix page.
- Forecasts are variable and can change significantly over a forecast cycle and across the landscape.
- This is another tool for gaining better situational awareness, and should be used for general planning purposes only.
-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

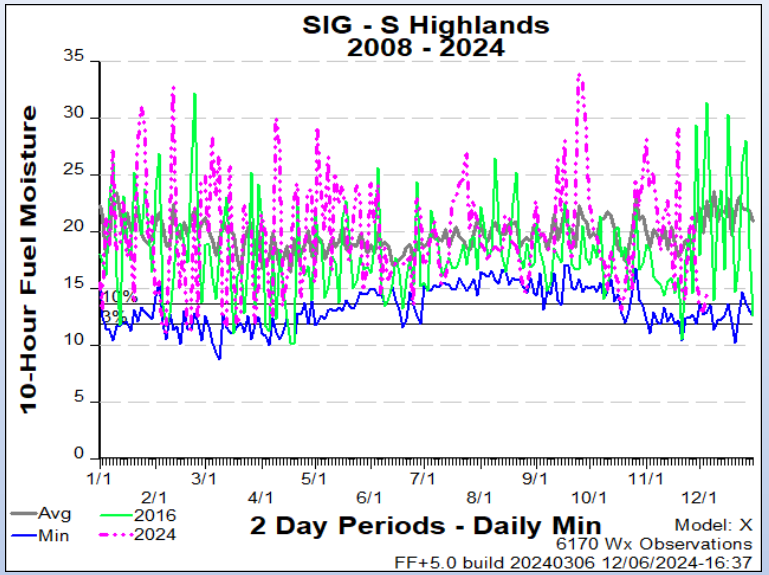
To reduce duplication & increase situational awareness, slides 11-34 are organized by FDRA in this order:

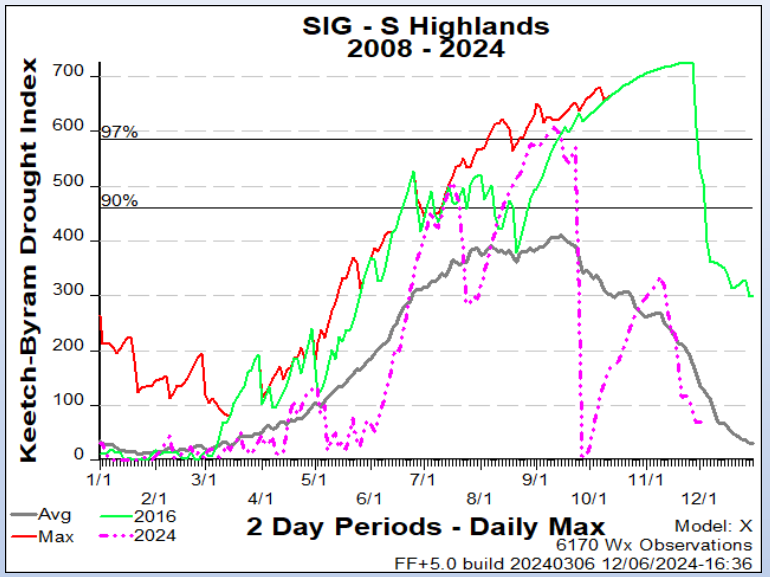
**(R3 = Region 3, R2 = Region 2, R1 = Region 1)*

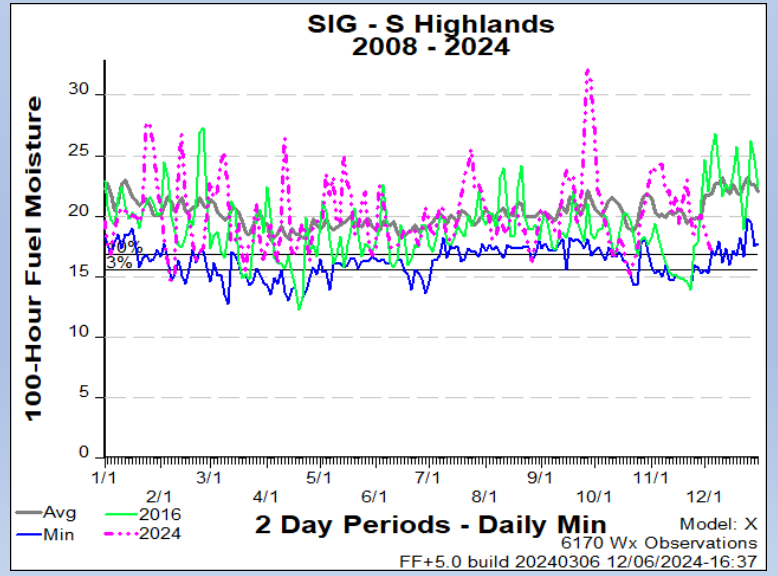
- Southern Highlands (R3)
- Central Mountains (R3)
- Northern Highlands (R3)
- Blue Ridge Escarpment (R2 & R3)
- Western Piedmont (R2 & R3)
- Eastern Piedmont (R2)
- Sandhills (R2)
- North Coast (R1)
- South Coast (R1 & R2)

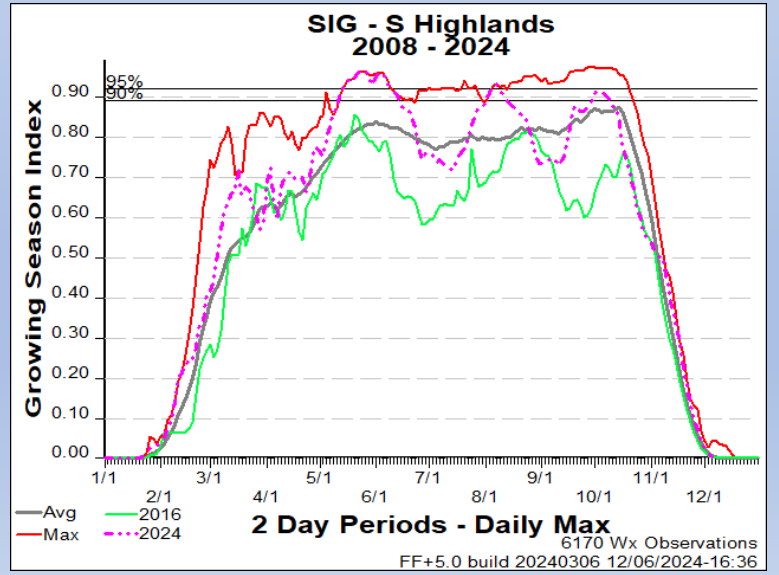
FDRA – Southern Highlands

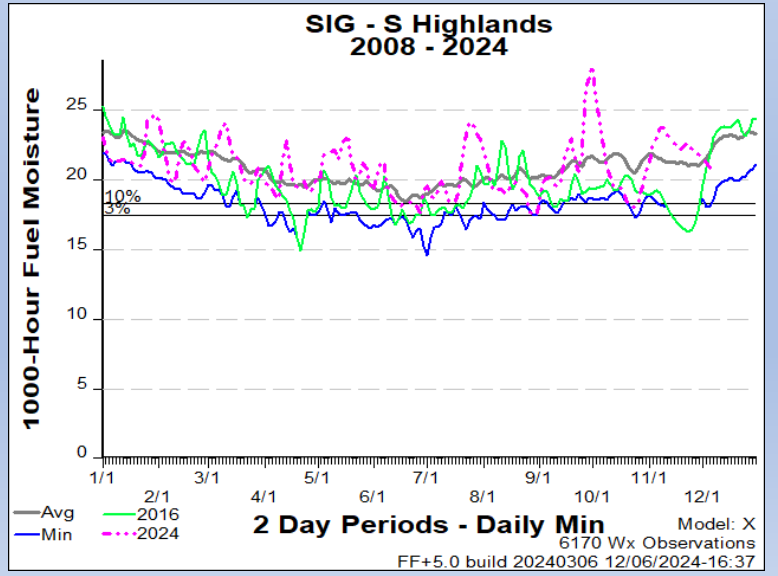






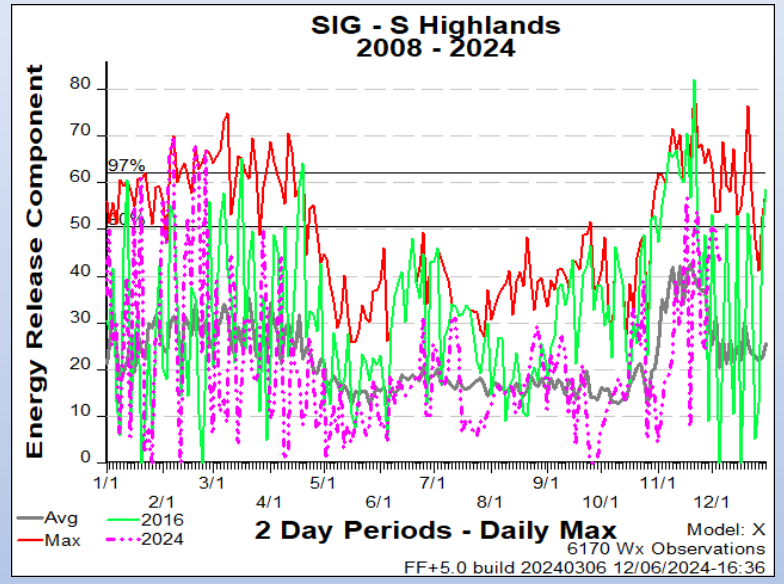




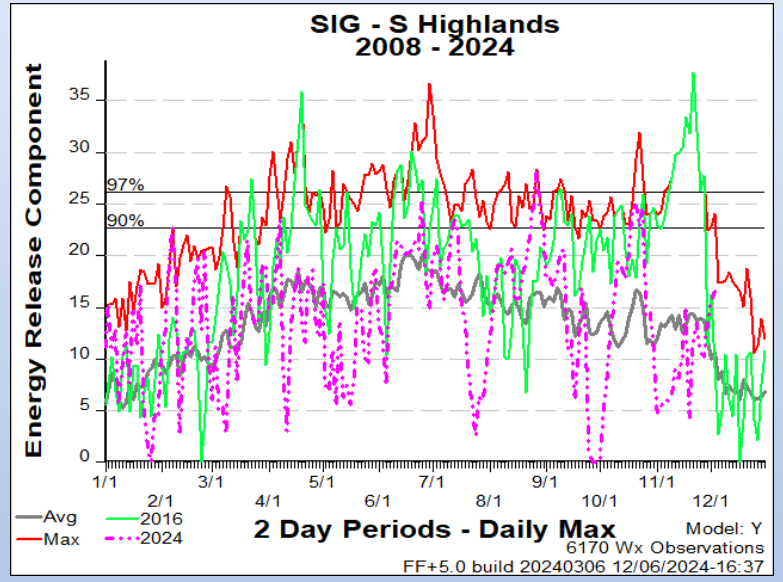


FDRA – Southern Highlands

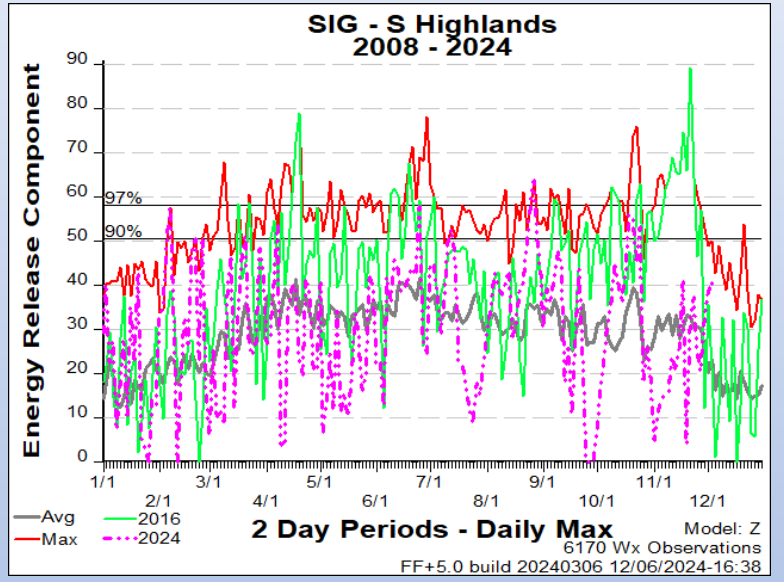
ERC-X



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 2016 are displayed along with Year-to-Date 2024

Weekly Outlook

Southern Highlands FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

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

DAY	FRI 06-Dec	SAT 07-Dec	SUN 08-Dec	MON 09-Dec	TUE 10-Dec	WED 11-Dec	THU 12-Dec
Avg. Max. Temp. (°F)	36	47	54	50	57	44	39
Avg. Min. Humidity (%)	23	33	48	91	88	66	47
Avg. 20' Wind Speed (mph)	4	2	3	4	3	7	5
Avg. Wind Direction*	NW	W	SW	S	S	WNW	NW
Avg. Probability of Precip. (%)	0	0	85	85	84	37	1
Days Since a Wetting Rain**	9.0	10.0	0.0	0.0			
Forecast ERC (Fuel Model X)	52.6	58.3	55.6	19.0	0.7	6.8	39.3
Forecast BI (Fuel Model X)	108.5	111.9	112.7	66.5	4.5	33.0	96.5
Forecast IC (Fuel Model X)	6.0	8.5	7.8	1.8	0.1	0.6	3.6
Forecast 100-Hr. FMC	18.1	17.9	17.3	18.0	20.6	22.7	23.1
Forecast 1000-Hr. FMC	23.8	23.8	23.7	23.7	23.8	23.7	23.7
KBDI	69.7						

Data Source:

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

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

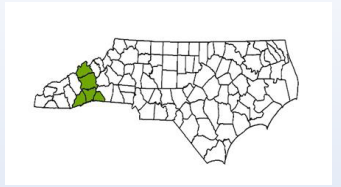
- **Tusquitee** (315602)
- **Locust Gap** (315802)
- **Highlands** (315803)

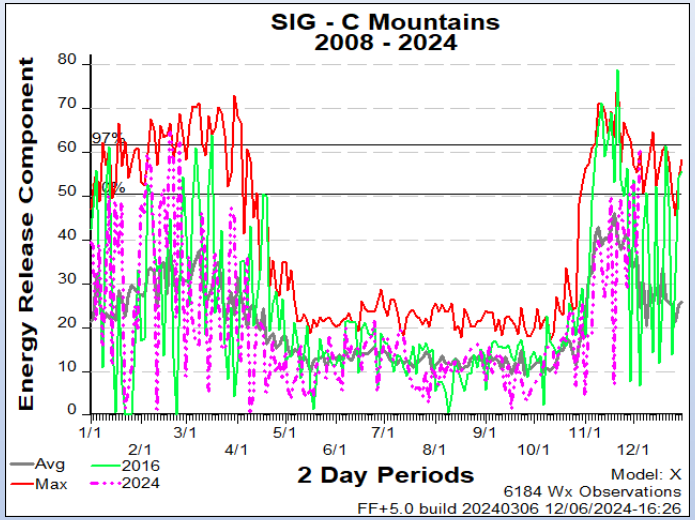
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 55°F	Greater than 55°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 5 mph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

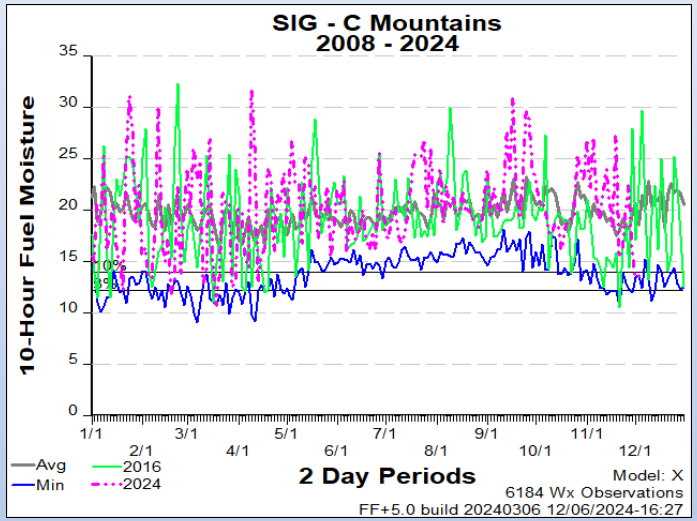
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

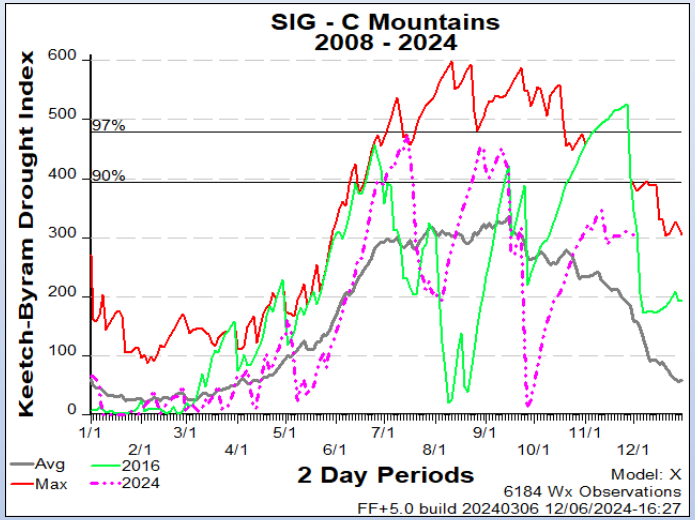
0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

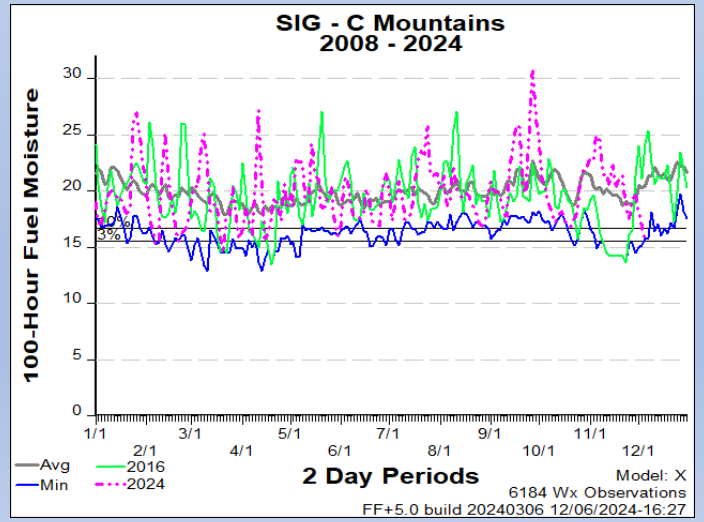
FDRA – Central Mountains

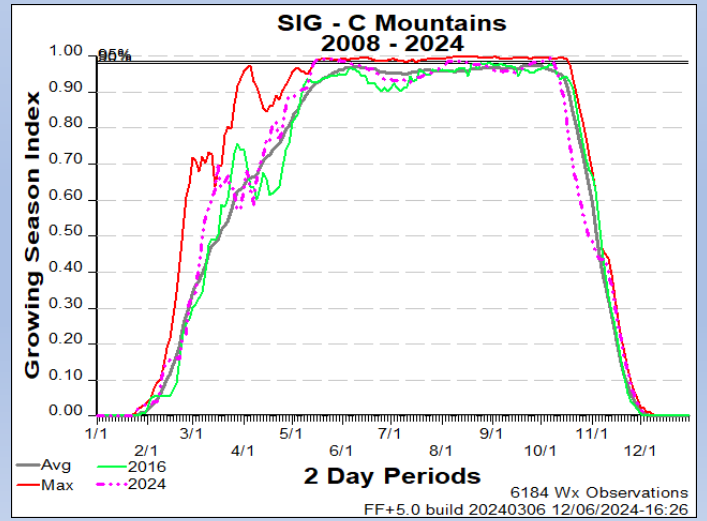


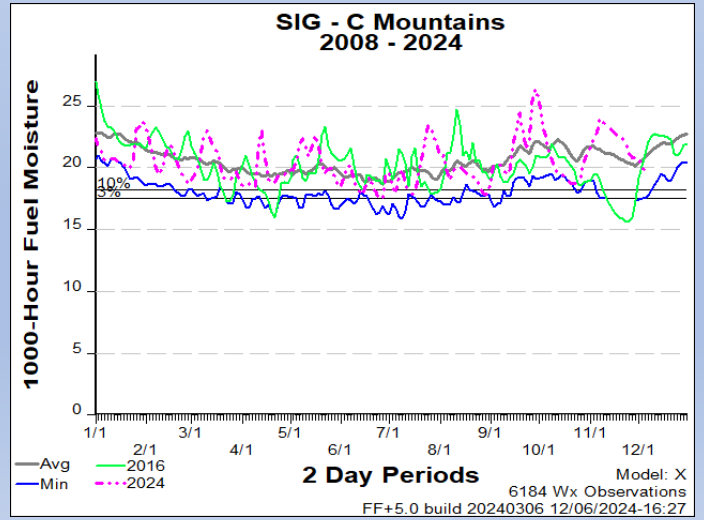




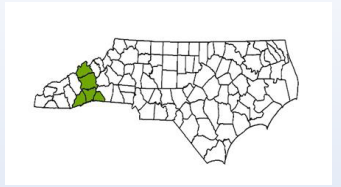




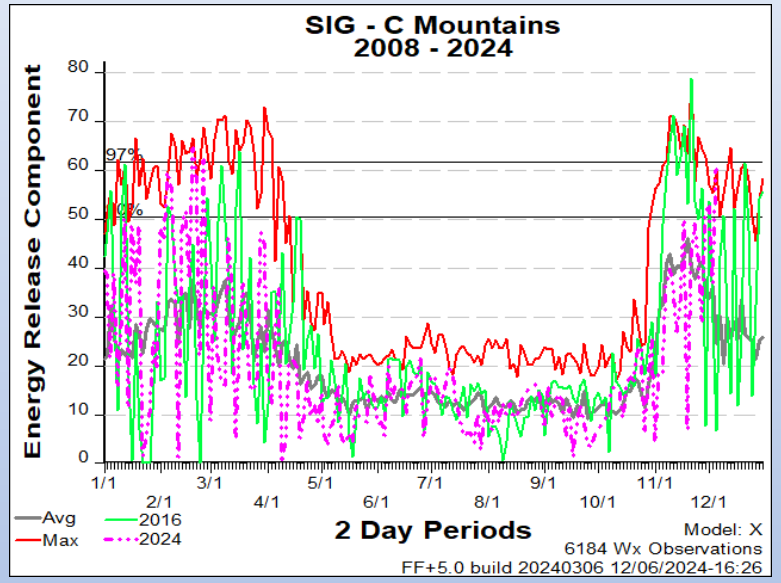




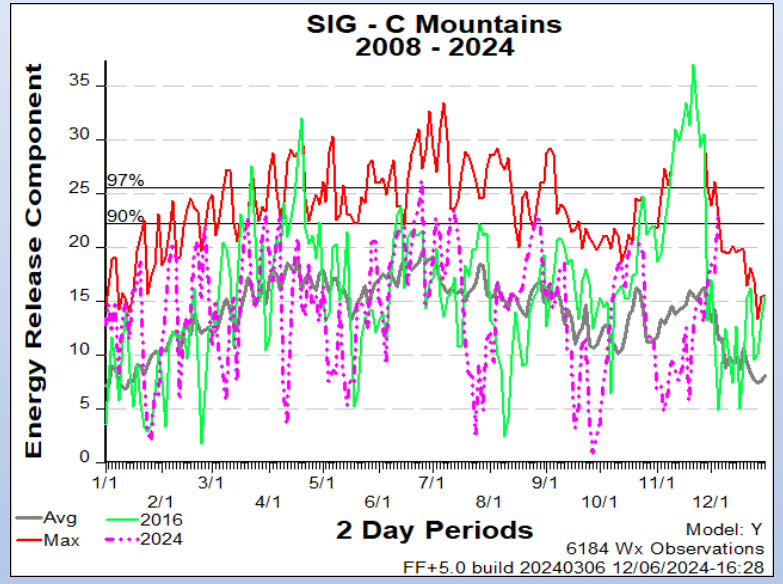
FDRA – Central Mountains



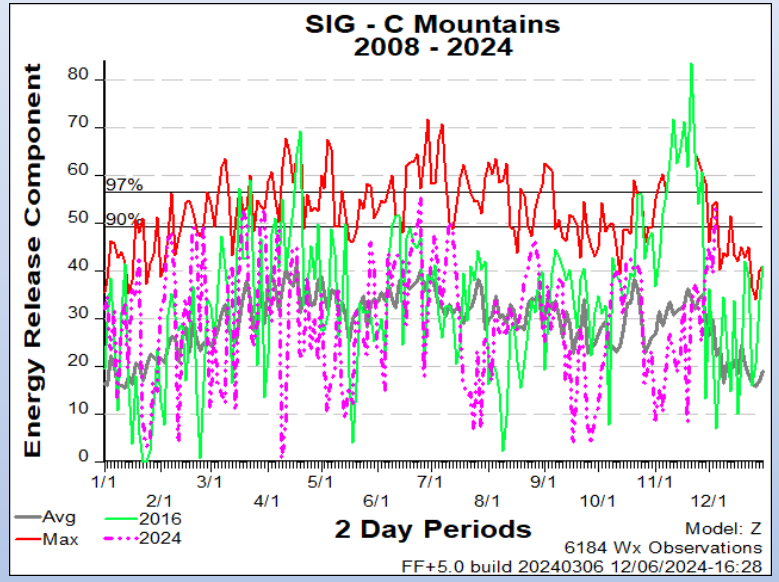
ERC-X



ERC-Y



ERC-Z



Comparison of ERC by NFDRS Fuel Model

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

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

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

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

Weekly Outlook

Central Mountains FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

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

DAY	FRI 06-Dec	SAT 07-Dec	SUN 08-Dec	MON 09-Dec	TUE 10-Dec	WED 11-Dec	THU 12-Dec
Avg. Max. Temp. (°F)	38	52	61	57	60	48	42
Avg. Min. Humidity (%)	23	30	45	79	84	65	44
Avg. 20' Wind Speed (mph)	5	3	3	5	4	8	6
Avg. Wind Direction*	WNW	W	WNW	SSW	S	WNW	NW
Avg. Probability of Precip. (%)	0	0	87	79	83	51	0
Days Since a Wetting Rain**	6.3	7.3	8.3	0.0			
Forecast ERC (Fuel Model X)	57.6	62.6	57.5	31.0	11.1	10.5	44.6
Forecast BI (Fuel Model X)	128.2	112.7	108.6	91.0	36.5	45.6	101.5
Forecast IC (Fuel Model X)	7.0	8.4	7.2	3.7	0.8	0.9	4.2
Forecast 100-Hr. FMC	16.7	16.6	16.0	16.6	19.7	21.7	22.0
Forecast 1000-Hr. FMC	23.2	23.1	23.0	22.9	22.9	22.9	22.9
KBDI	308.3						

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

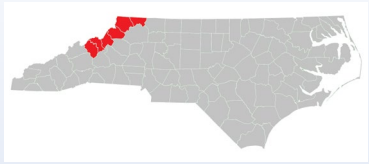
Values in the table above are averages from 3 stations in this FDRA:

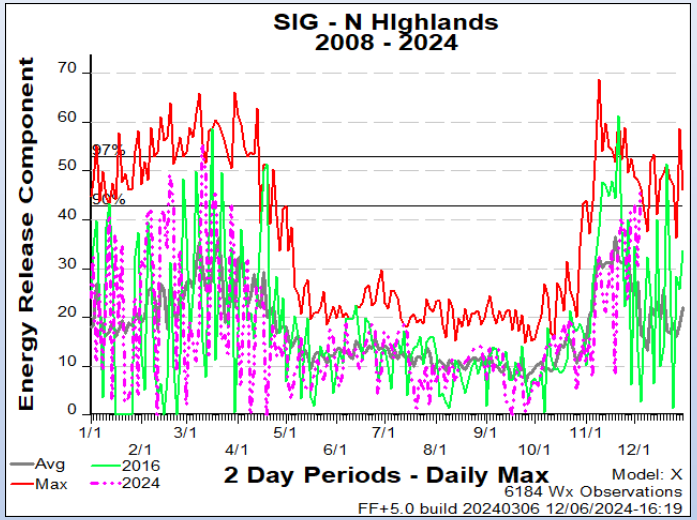
- **7 Mile Ridge** (313302)
- **Davidson River** (316001)
- **Mtn Horticultural Crops Res Stn** (316141)

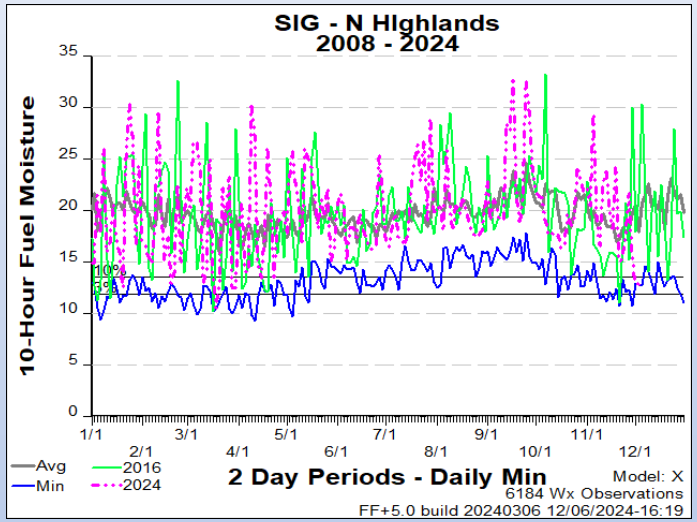
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 5 mph	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

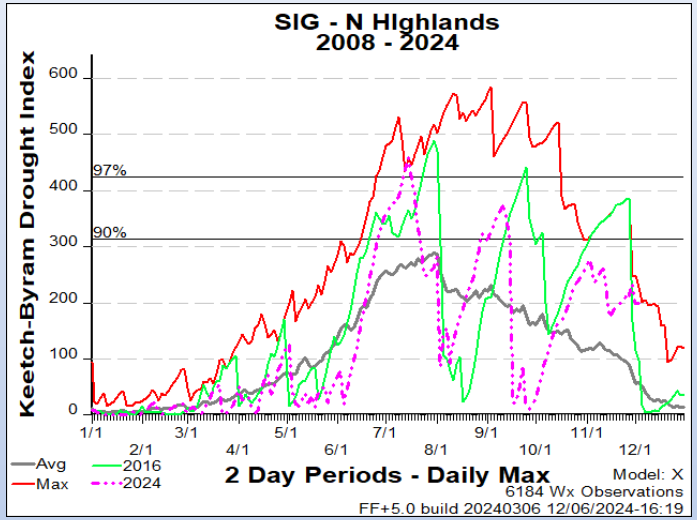
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

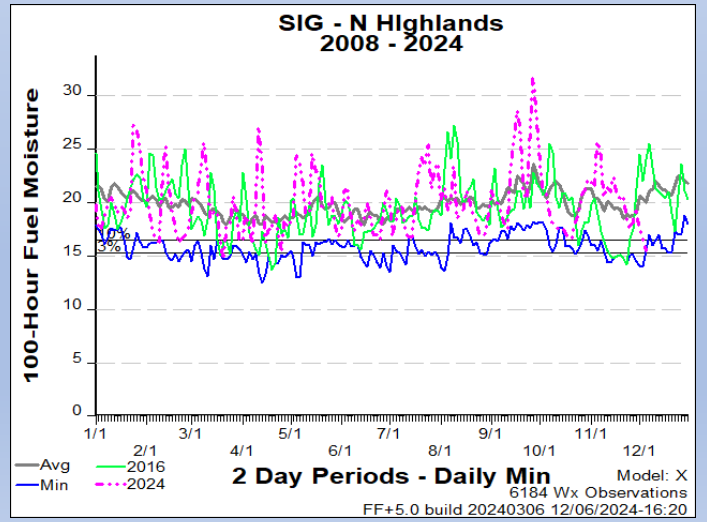
FDRA – Northern Highlands

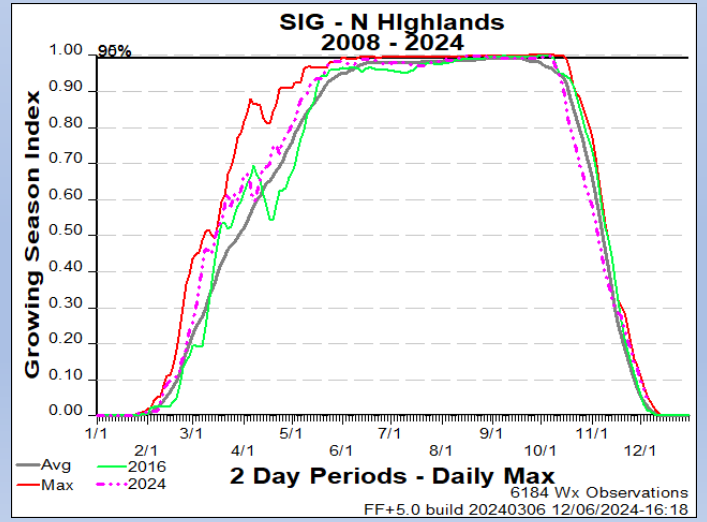


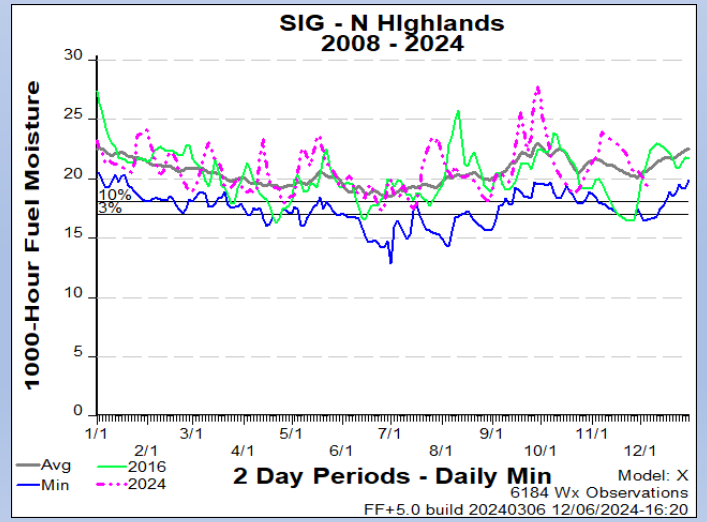




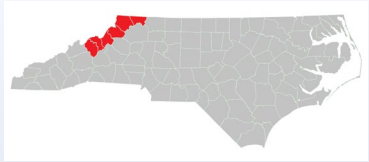




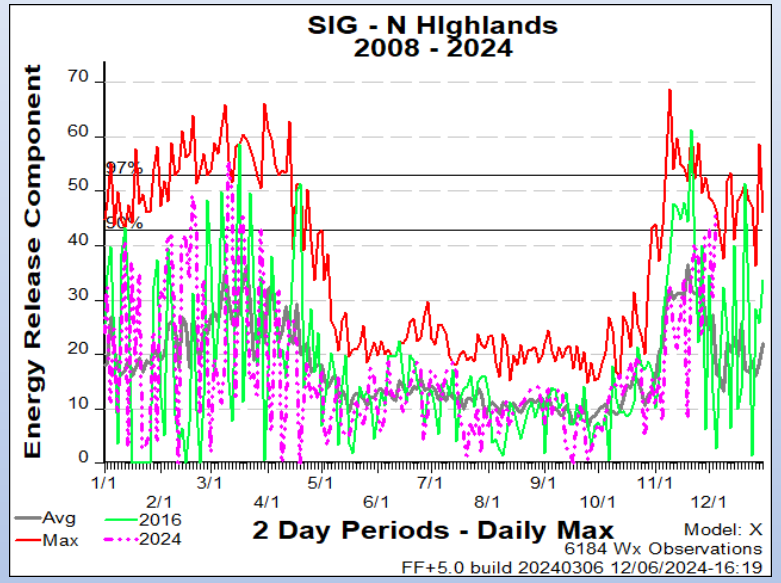




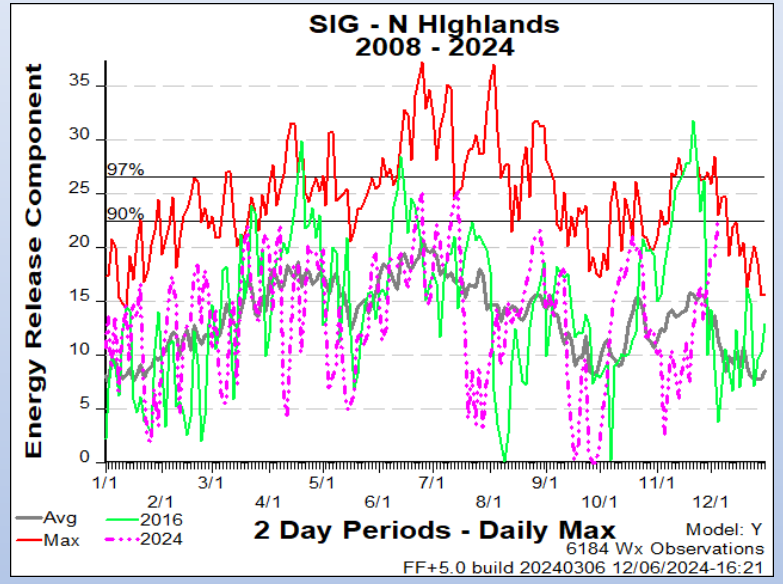
FDRA – Northern Highlands



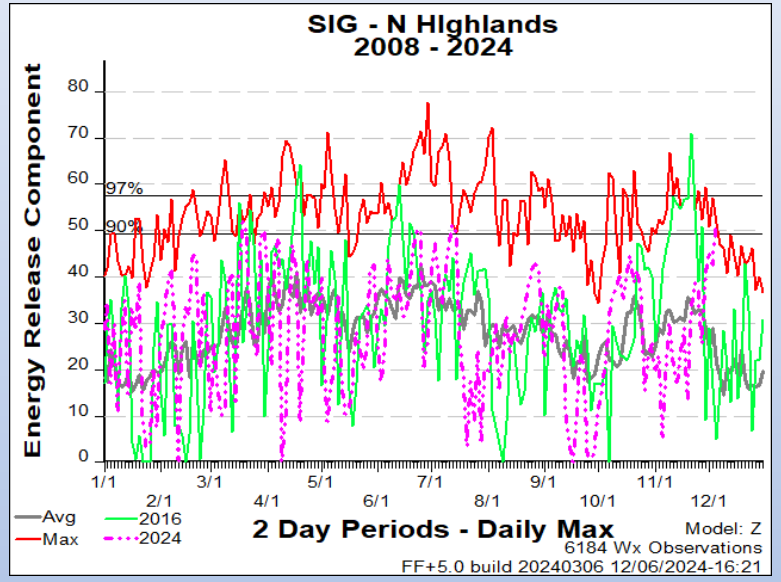
ERC-X



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 2016 are displayed along with Year-to-Date 2024

Weekly Outlook

Northern Highlands FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

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

DAY	FRI 06-Dec	SAT 07-Dec	SUN 08-Dec	MON 09-Dec	TUE 10-Dec	WED 11-Dec	THU 12-Dec
Avg. Max. Temp. (°F)	33	45	56	52	56	47	37
Avg. Min. Humidity (%)	32	31	47	85	90	70	49
Avg. 20' Wind Speed (mph)	7	7	10	5	5	9	9
Avg. Wind Direction*	NW	WNW	WNW	SW	SSW	W	NW
Avg. Probability of Precip. (%)	0	0	80	87	83	48	2
Days Since a Wetting Rain**	3.7	4.7	5.7	0.0			
Forecast ERC (Fuel Model X)	45.0	52.0	50.4	19.5	7.7	6.2	32.0
Forecast BI (Fuel Model X)	104.0	106.9	116.8	61.2	26.8	26.6	85.0
Forecast IC (Fuel Model X)	6.2	9.2	10.2	3.2	0.6	0.6	4.1
Forecast 100-Hr. FMC	16.6	16.4	15.9	16.2	17.8	19.8	20.7
Forecast 1000-Hr. FMC	23.2	23.1	23.0	23.0	22.8	23.0	22.9
KBDI	185.0						

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:

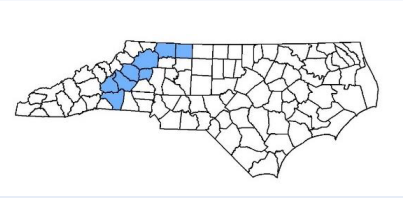
- **Laurel Springs** (310101)
- **Upper Mountain Research Stn** (310141)
- **Busick** (313402)

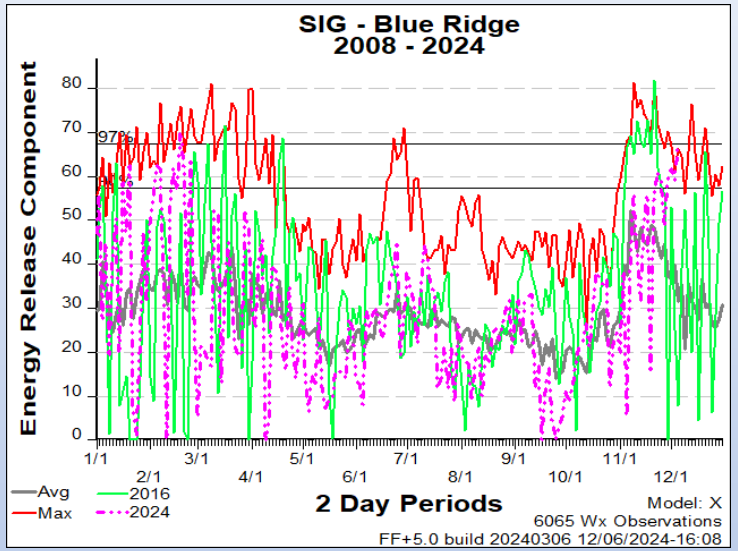
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 58°F	Greater than 58°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 2 mph	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

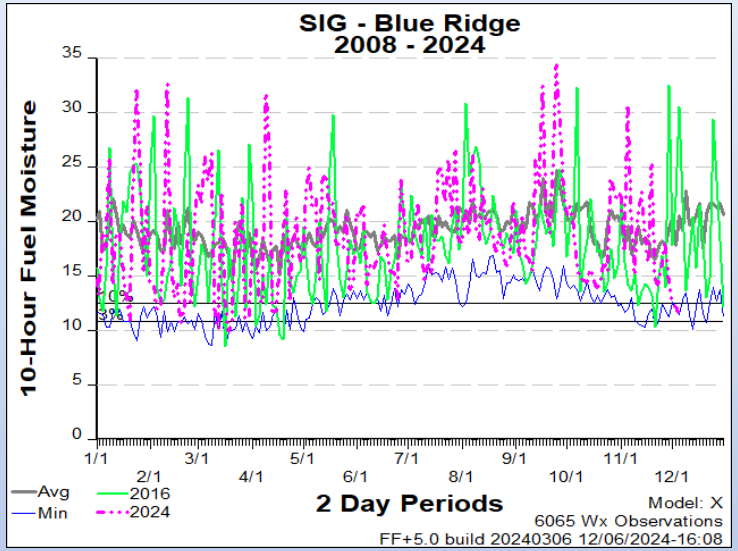
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

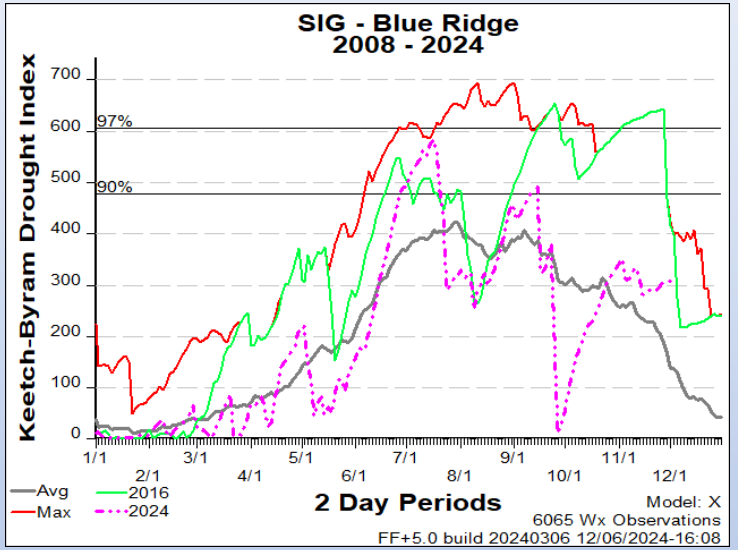
0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

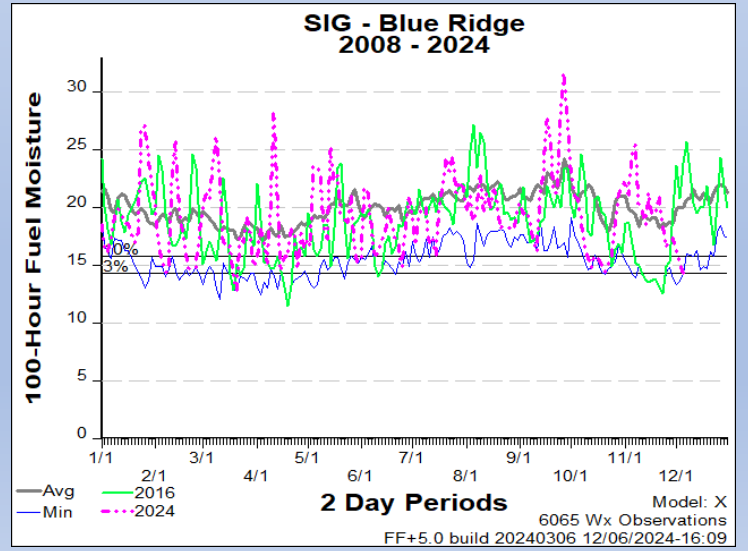
FDRA – Blue Ridge Escarpment

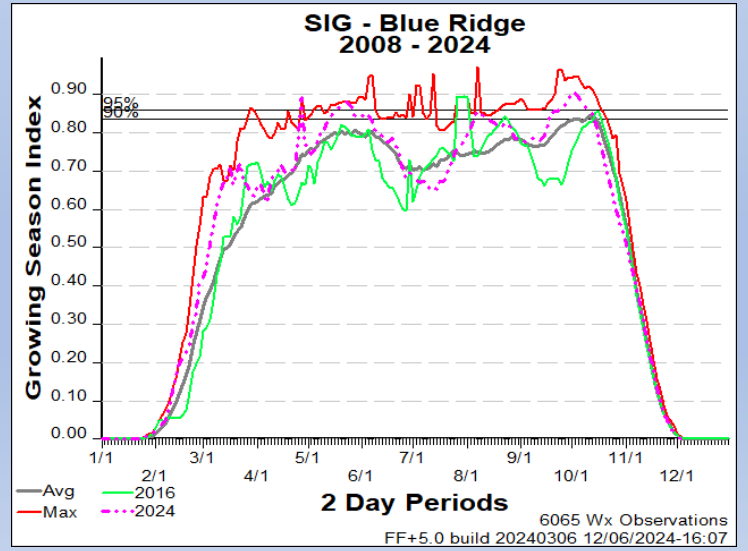


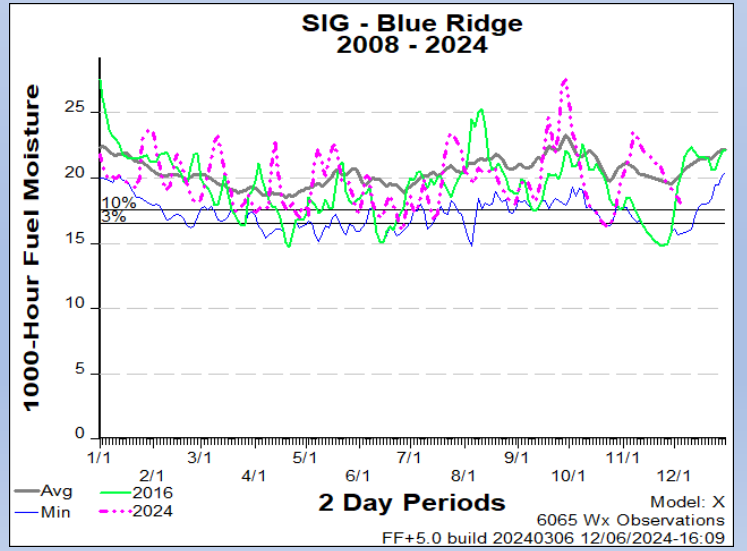




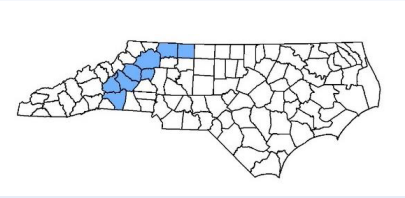




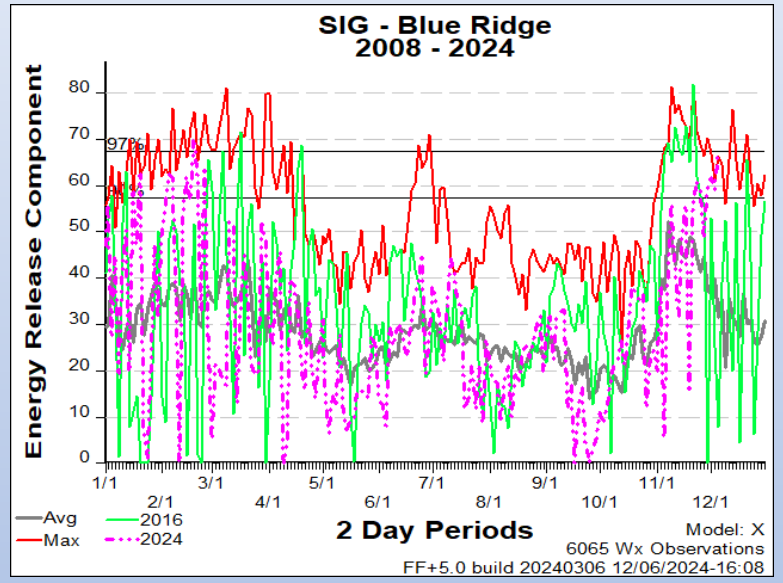




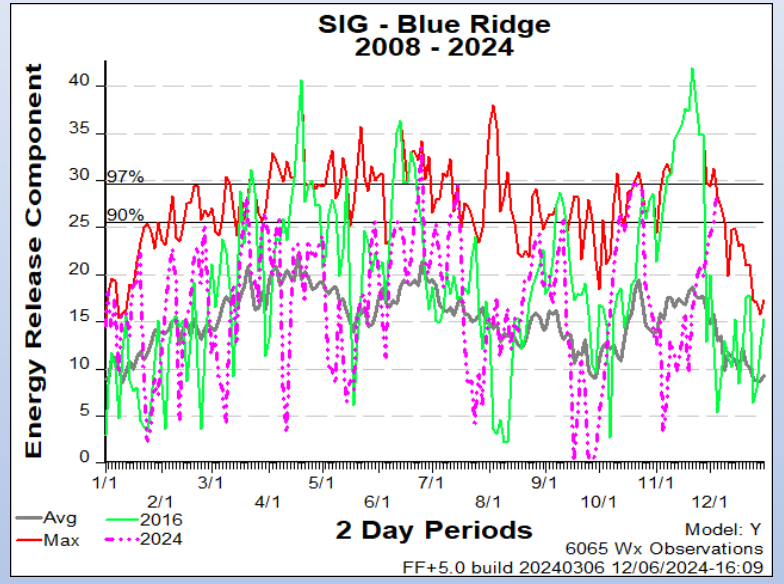
FDRA – Blue Ridge Escarpment



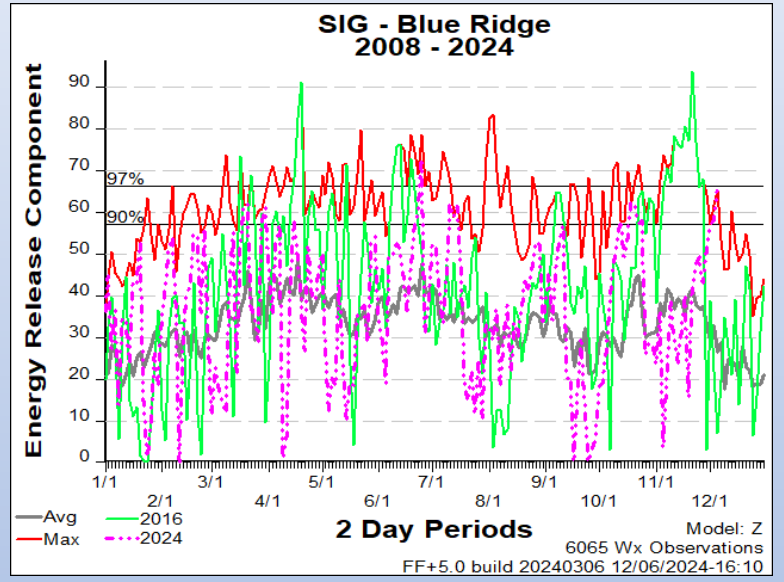
ERC-X



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 2016 are displayed along with Year-to-Date 2024

Weekly Outlook

Blue Ridge Escarpment FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

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

DAY	FRI 06-Dec	SAT 07-Dec	SUN 08-Dec	MON 09-Dec	TUE 10-Dec	WED 11-Dec	THU 12-Dec
Avg. Max. Temp. (°F)	39	50	61	55	59	51	44
Avg. Min. Humidity (%)	22	27	38	73	83	60	38
Avg. 20' Wind Speed (mph)	4	3	4	4	3	7	5
Avg. Wind Direction*	W	WSW	W	SW	SSW	W	NW
Avg. Probability of Precip. (%)	0	0	78	76	79	54	1
Days Since a Wetting Rain**	14.3	15.3	16.3	0.0			
Forecast ERC (Fuel Model X)	62.3	64.2	59.5	36.1	15.4	14.1	48.8
Forecast BI (Fuel Model X)	112.0	112.9	117.4	95.1	48.2	47.2	100.5
Forecast IC (Fuel Model X)	8.0	9.4	9.9	4.6	1.0	1.2	5.3
Forecast 100-Hr. FMC	14.0	13.8	13.3	17.2	19.9	23.0	23.5
Forecast 1000-Hr. FMC	17.7	17.6	17.3	17.7	17.6	18.2	18.7
KBDI	303.3						

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:

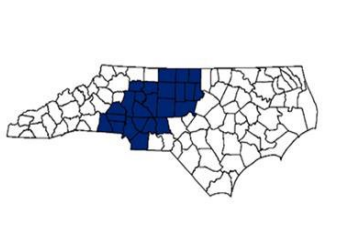
- **Rendezvous Mtn.** (312001)
- **North Cove Pinnacle (fr1)** (314301)
- **Rutherford County** (316302)

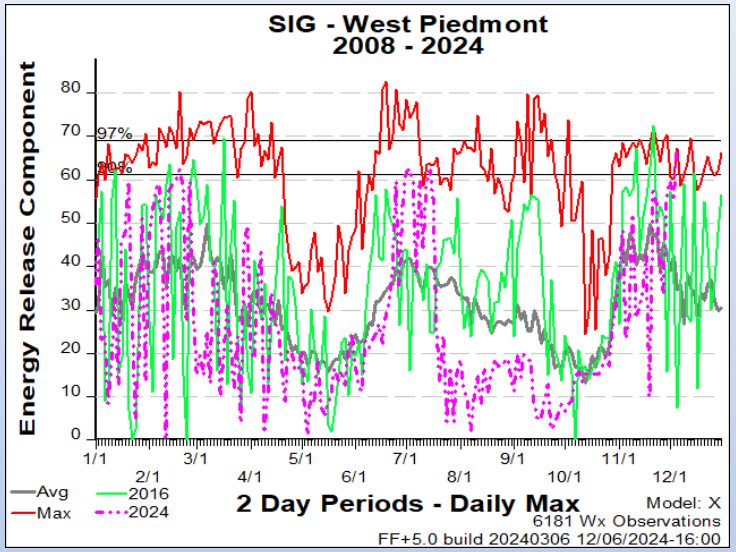
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 40°F	Between 40°F and 50°F	Greater than 50°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 2 mph	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

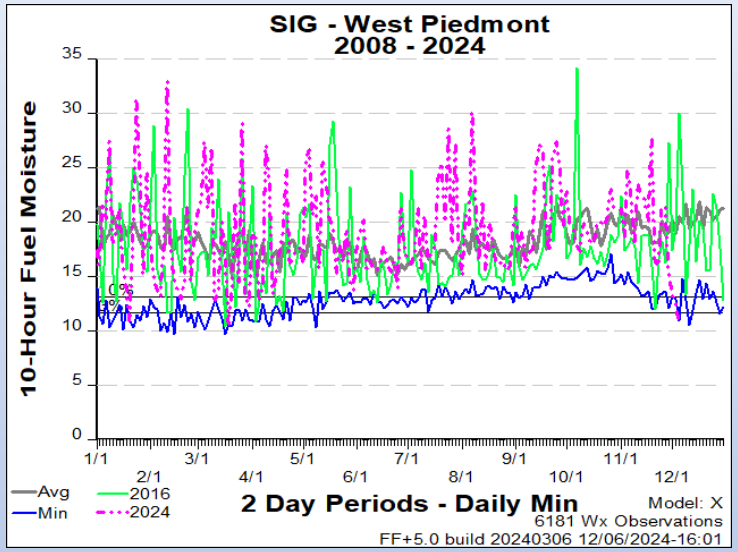
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

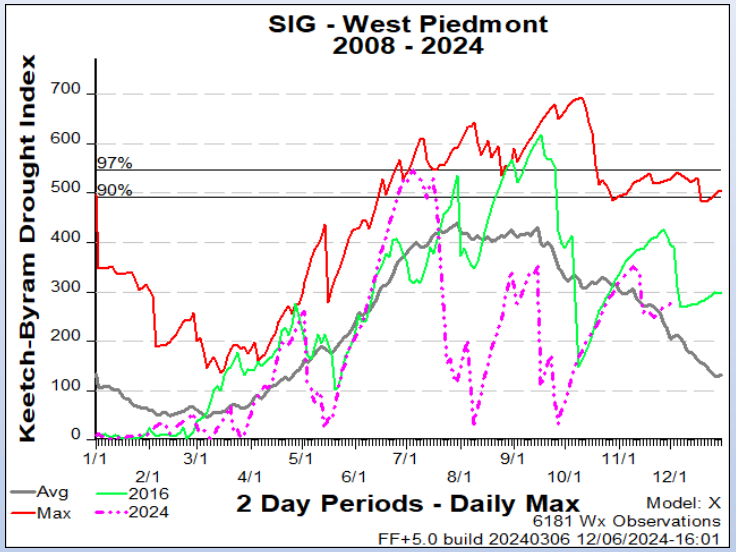
0-74th; 75-89th; 90th+ (Indices)
26-100th; 11-25th; 0-10th (Fuel Moisture)

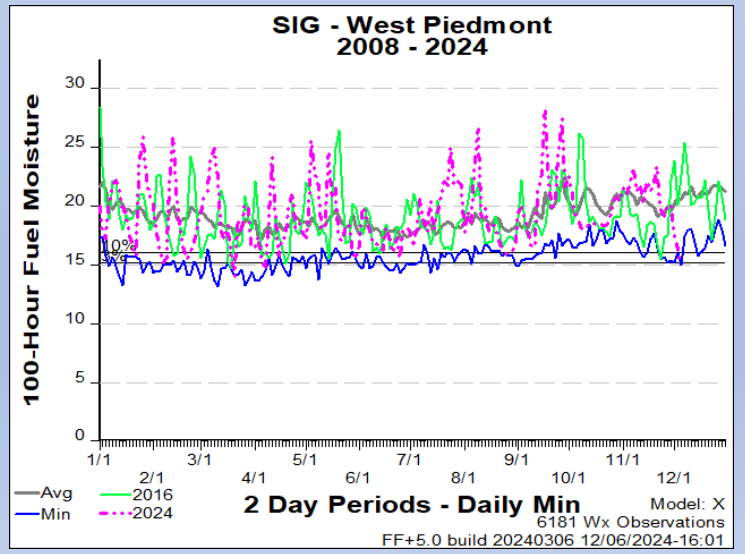
FDRA – Western Piedmont

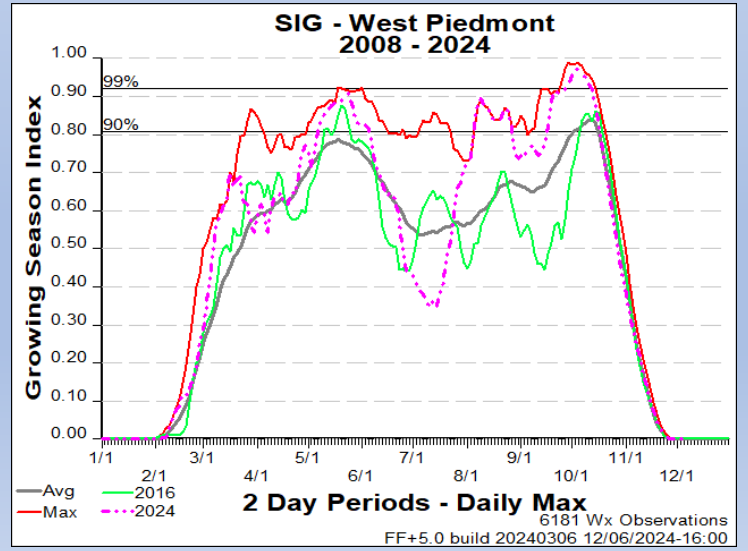


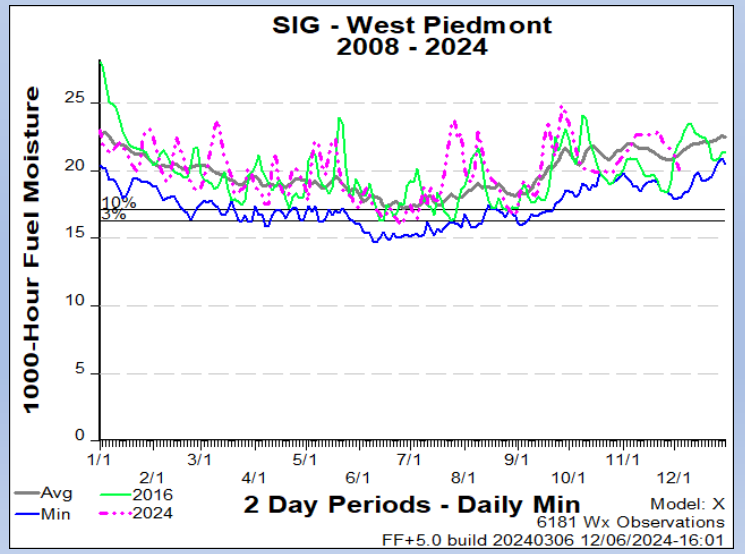




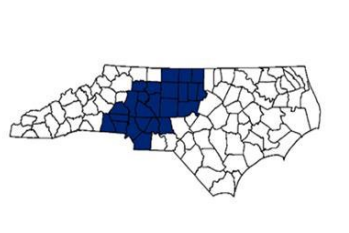




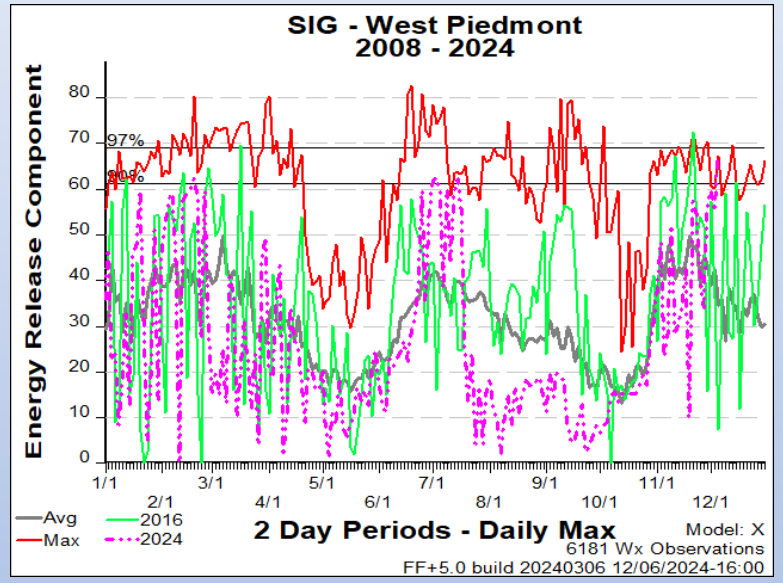




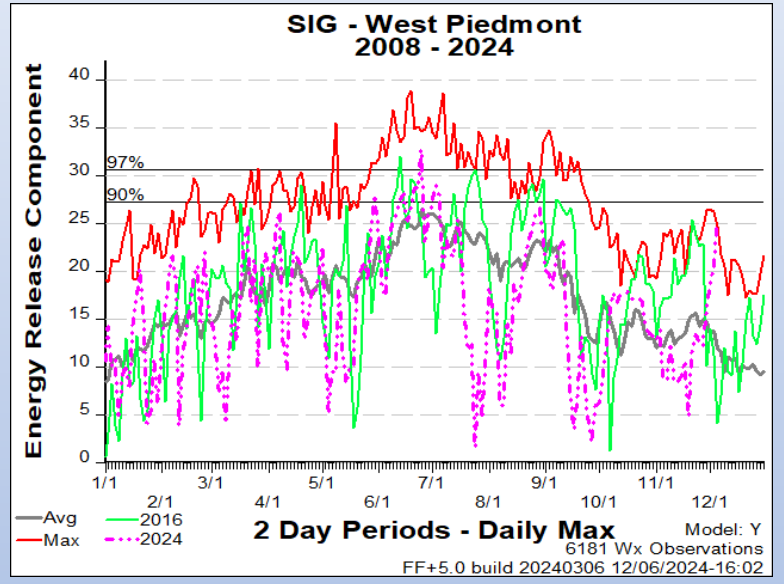
FDRA – Western Piedmont



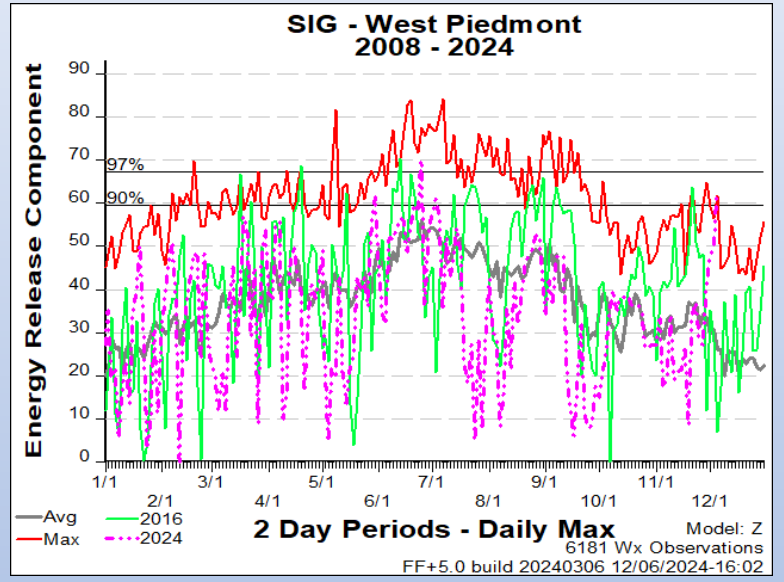
ERC-X



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 2016 are displayed along with Year-to-Date 2024

Weekly Outlook

Western Piedmont FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

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

DAY	FRI 06-Dec	SAT 07-Dec	SUN 08-Dec	MON 09-Dec	TUE 10-Dec	WED 11-Dec	THU 12-Dec
Avg. Max. Temp. (°F)	40	49	62	59	64	59	46
Avg. Min. Humidity (%)	22	32	43	67	88	71	47
Avg. 20' Wind Speed (mph)	2	3	4	6	6	7	4
Avg. Wind Direction*	WNW	SW	SW	SW	SSW	SW	WNW
Avg. Probability of Precip. (%)	0	0	54	58	85	64	3
Days Since a Wetting Rain**	9.0	10.0	11.0	4.0			
Forecast ERC (Fuel Model X)	63.9	59.7	56.4	43.9	19.1	7.5	43.9
Forecast BI (Fuel Model X)	115.1	100.8	103.9	103.6	59.3	29.7	90.2
Forecast IC (Fuel Model X)	8.2	6.2	6.6	5.2	1.5	0.5	3.7
Forecast 100-Hr. FMC	16.1	15.9	15.3	15.5	16.2	18.7	19.5
Forecast 1000-Hr. FMC	23.3	23.3	23.1	22.9	22.6	22.8	22.5
KBDI	276.0						

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

Data Source:

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

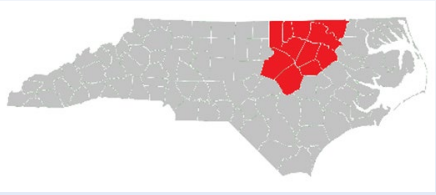
Values in the table above are averages from 3 stations in this FDRA:

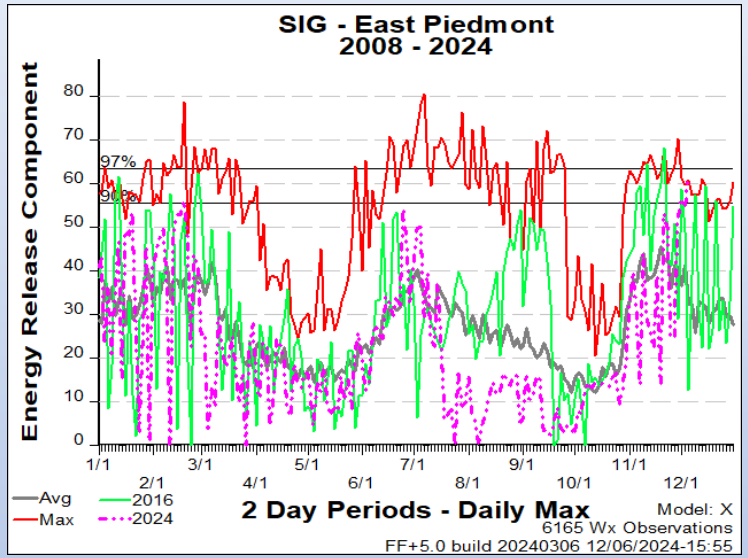
- **Duke Forest** (312501)
- **Lexington** (314602)
- **Mt. Island Lake** (316602)

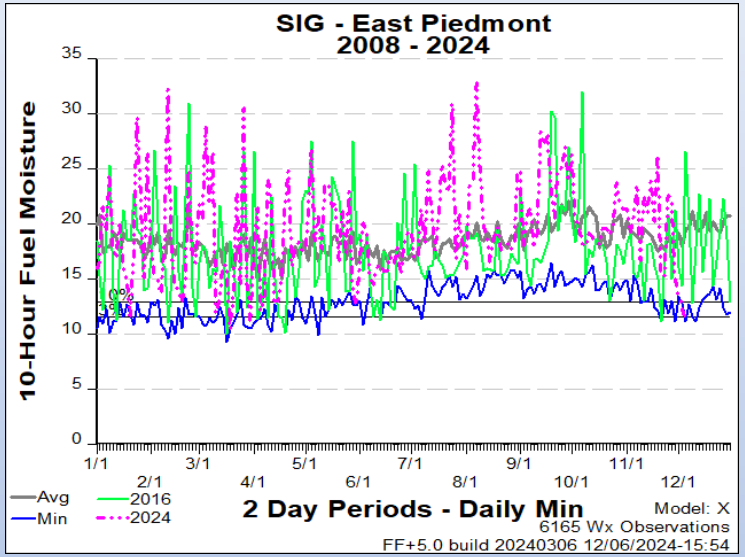
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 40°F	Between 40°F and 50°F	Greater than 50°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 2 mph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

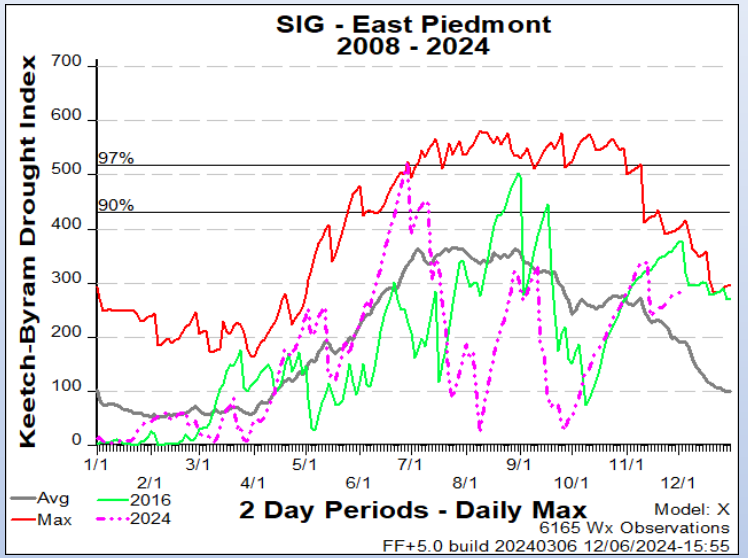
Other factors to consider when determining fire danger: **sky conditions, precipitation amount, number of days since rain,** and **season**

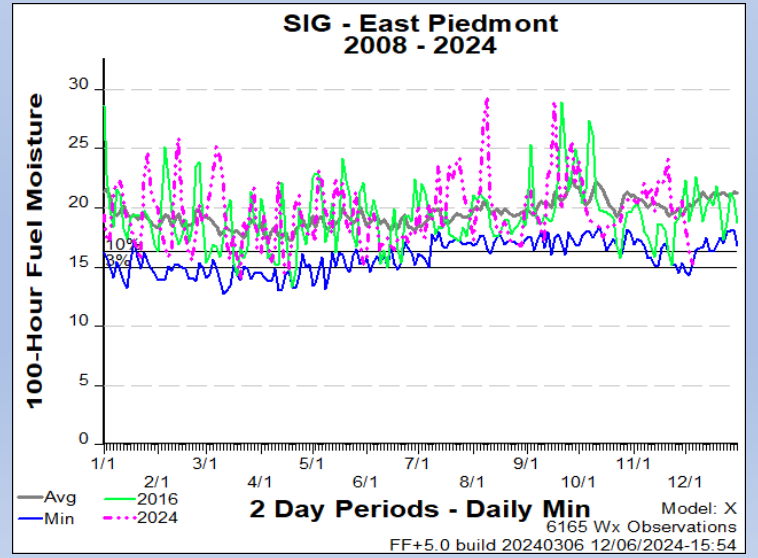
FDRA – Eastern Piedmont

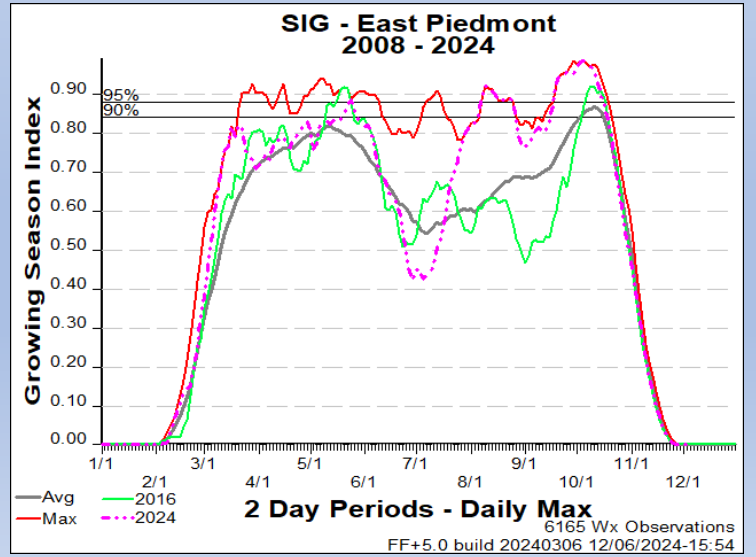


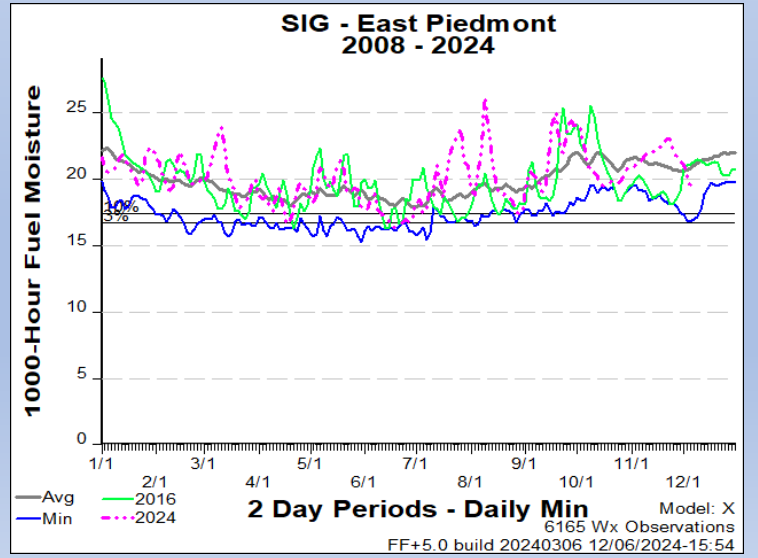












Weekly Outlook

Eastern Piedmont FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

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

DAY	FRI 06-Dec	SAT 07-Dec	SUN 08-Dec	MON 09-Dec	TUE 10-Dec	WED 11-Dec	THU 12-Dec
Avg. Max. Temp. (°F)	41	48	61	60	68	64	48
Avg. Min. Humidity (%)	26	33	43	64	79	79	48
Avg. 20' Wind Speed (mph)	2	3	5	5	6	8	5
Avg. Wind Direction*	NW	WSW	SW	SW	SSW	SW	NNW
Avg. Probability of Precip. (%)	0	0	30	54	78	69	8
Days Since a Wetting Rain**	1.0	2.0	3.0	4.0			
Forecast ERC (Fuel Model X)	59.5	58.1	56.2	47.4	18.9	7.1	36.3
Forecast BI (Fuel Model X)	110.5	100.0	104.8	105.2	61.4	27.7	82.7
Forecast IC (Fuel Model X)	8.1	6.9	7.7	6.5	1.8	0.6	3.2
Forecast 100-Hr. FMC	16.6	16.1	15.6	15.2	15.7	18.4	19.5
Forecast 1000-Hr. FMC	23.4	23.3	23.1	22.9	22.6	22.7	22.5
KBDI	285.8						

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

Data Source:

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

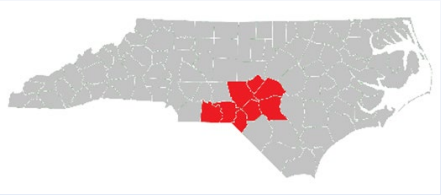
Values in the table above are averages from 4 stations in this FDRA:

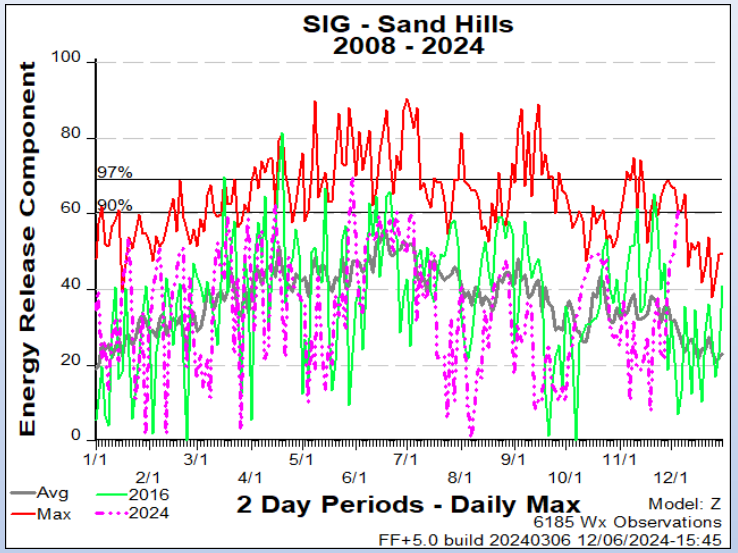
- **Oxford Tobacco Research Stn** (310841)
- **Upper Coastal Plain Res Stn** (312940)
- **Lake Wheeler Rd Field Lab** (314941)
- **Central Crops Research Station** (317441)

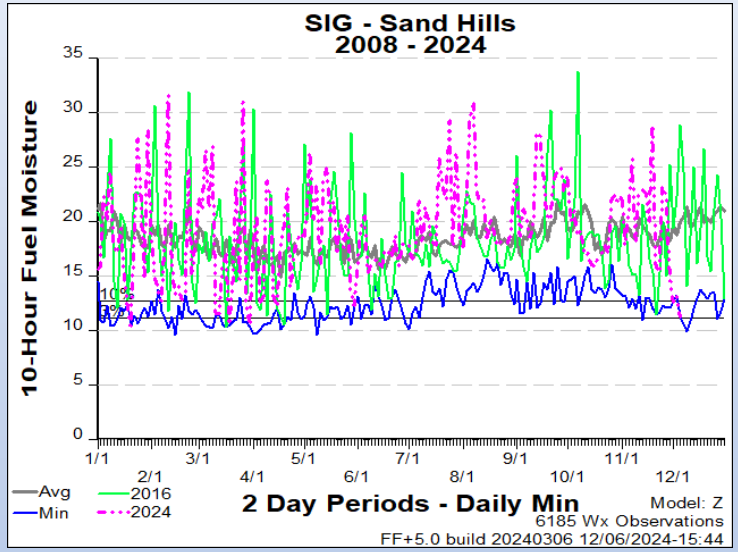
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 10 mph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

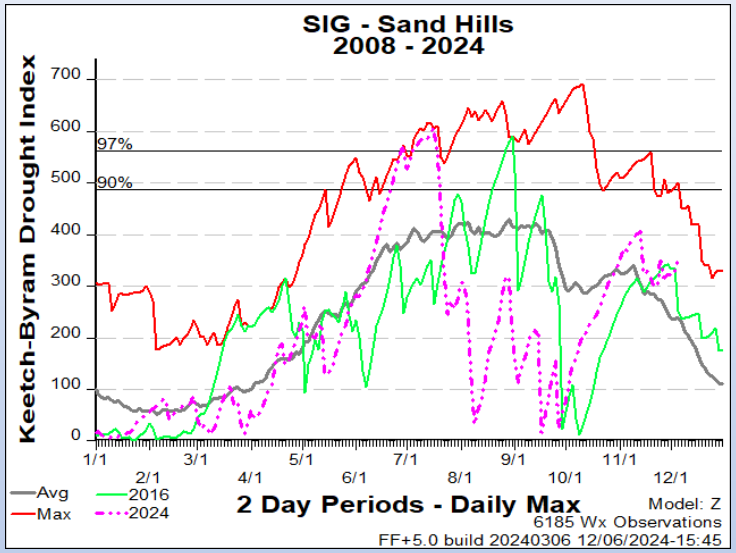
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

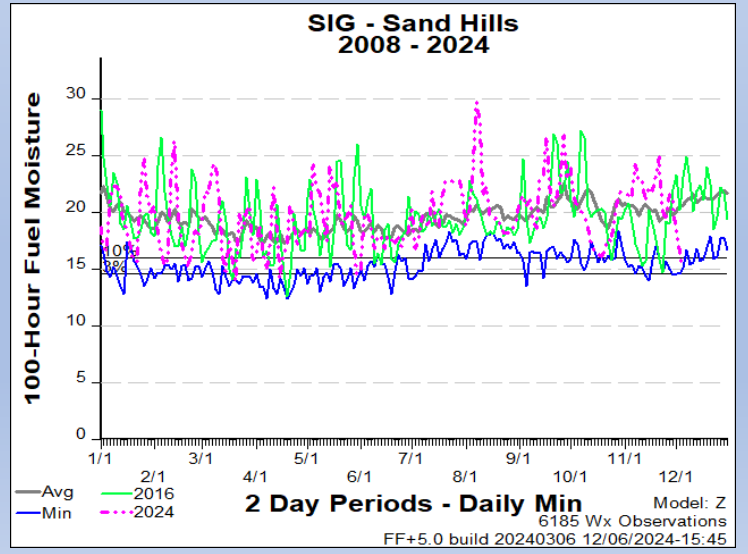
FDRA – Sandhills

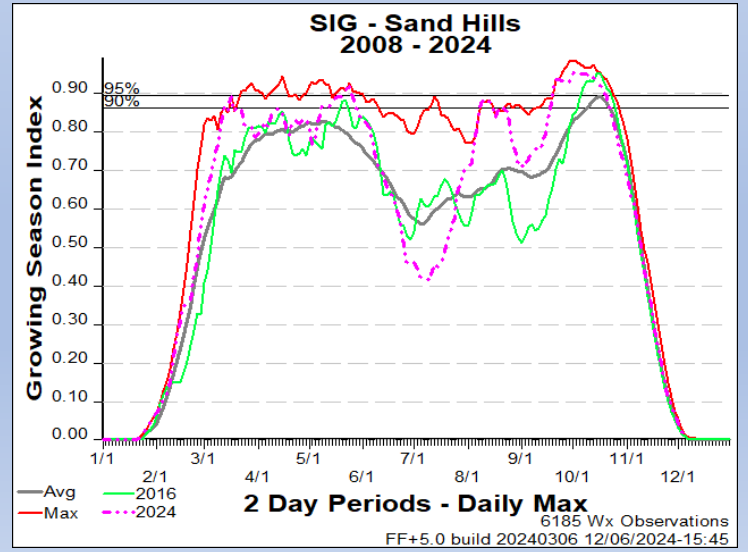


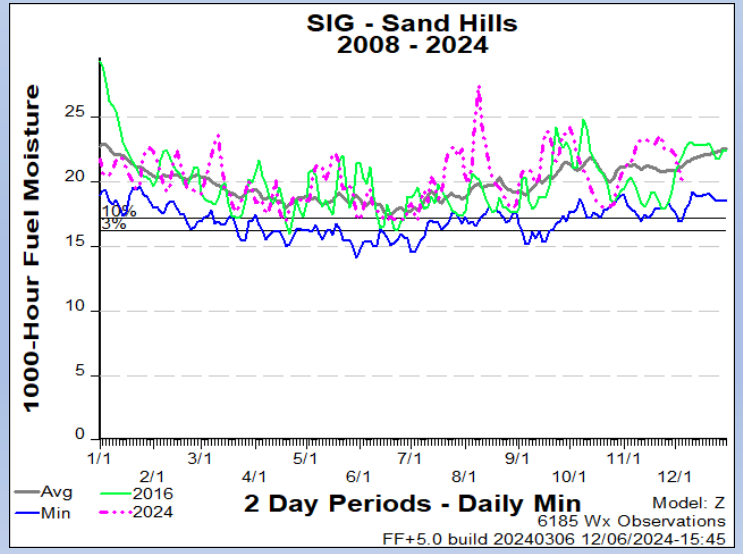












Weekly Outlook

Sandhills FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

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

DAY	FRI 06-Dec	SAT 07-Dec	SUN 08-Dec	MON 09-Dec	TUE 10-Dec	WED 11-Dec	THU 12-Dec
Avg. Max. Temp. (°F)	42	50	61	62	69	65	49
Avg. Min. Humidity (%)	23	28	39	58	76	72	45
Avg. 20' Wind Speed (mph)	3	3	3	4	5	7	4
Avg. Wind Direction*	NW	SW	SW	SW	SSW	SW	WSW
Avg. Probability of Precip. (%)	0	0	36	48	77	66	6
Days Since a Wetting Rain**	7.0	8.0	9.0	10.0			
Forecast ERC (Fuel Model Z)	52.1	52.6	51.1	44.6	24.4	16.2	32.2
Forecast BI (Fuel Model Z)	44.1	37.3	37.5	38.6	26.7	21.0	31.9
Forecast IC (Fuel Model Z)	8.2	6.2	5.9	5.6	1.6	0.7	3.0
Forecast 100-Hr. FMC	16.5	16.0	15.5	15.1	16.3	19.1	19.2
Forecast 1000-Hr. FMC	23.6	23.5	23.3	23.1	22.9	22.8	22.4
KBDI	326.7						

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

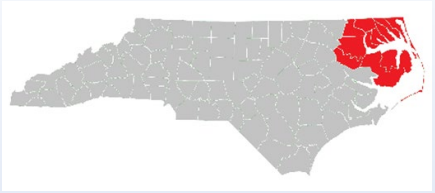
Values in the table above are averages from 3 stations in this FDRA:

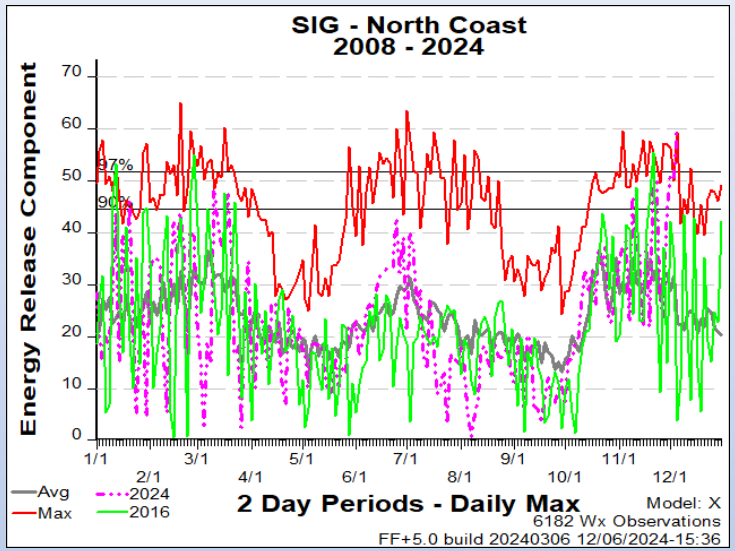
- **Sandhills Research Station** (317040)
- **Rockingham** (318202)
- **Fort Liberty** (318503)

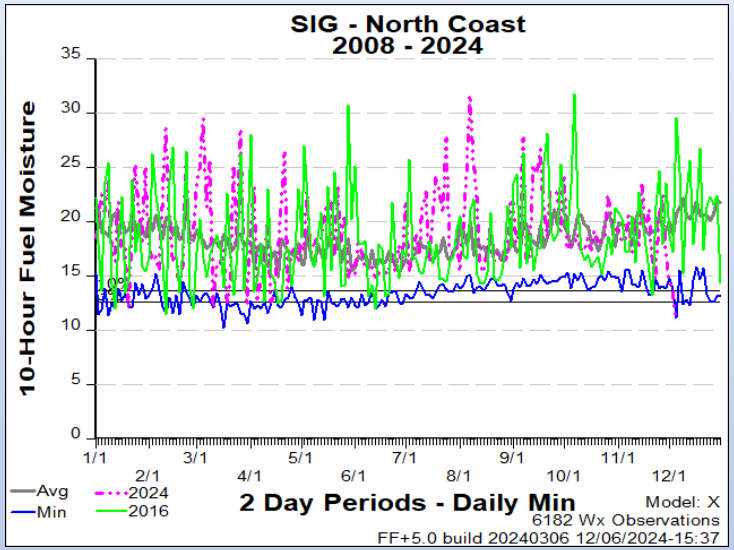
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
Avg. Min. Humidity	Greater than 40%	Between 30% and 40%	Less than 30%
Avg. 20' Wind Speed	Less than 4 mph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

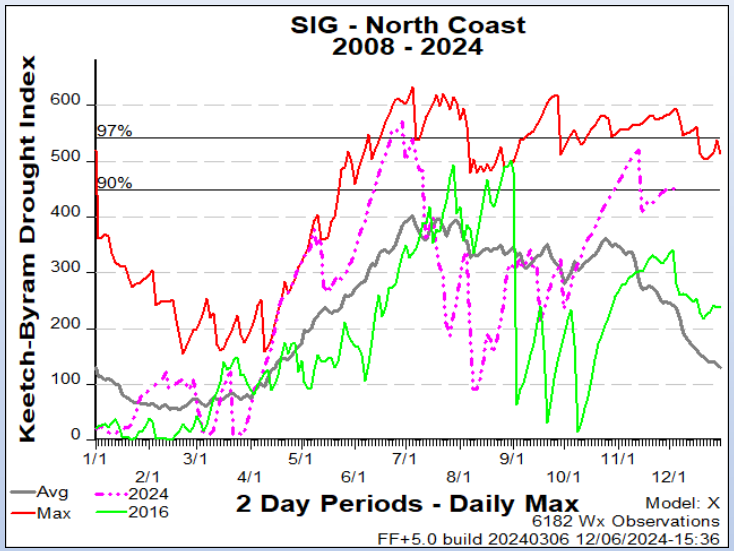
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

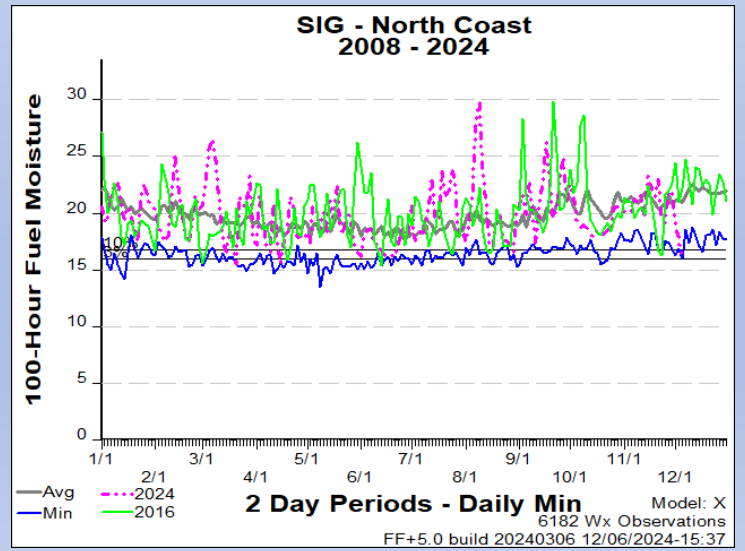
FDRA – North Coast

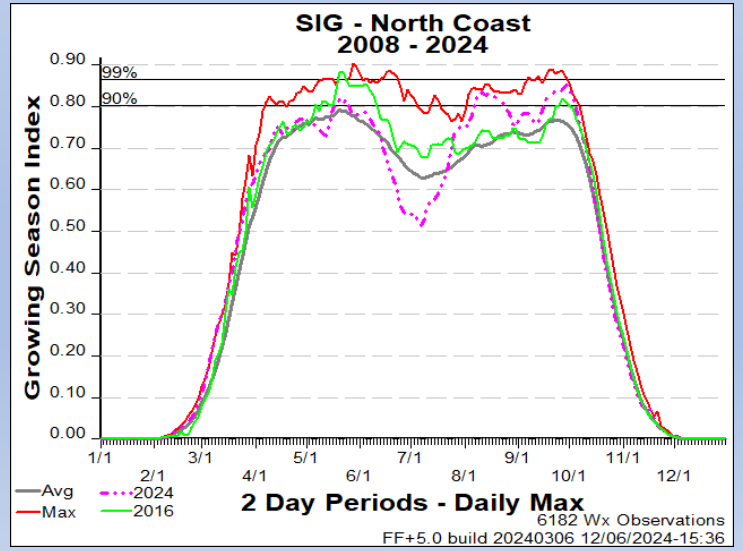


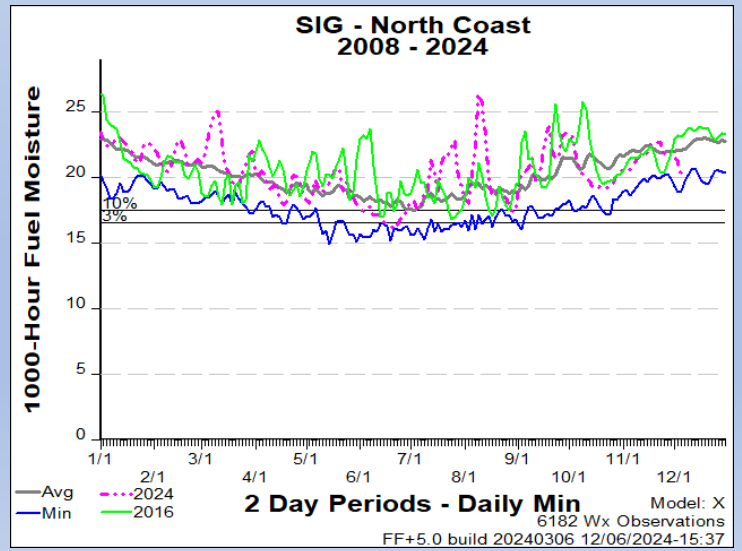












Weekly Outlook

Northern Coastal FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

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

DAY	FRI 06-Dec	SAT 07-Dec	SUN 08-Dec	MON 09-Dec	TUE 10-Dec	WED 11-Dec	THU 12-Dec
Avg. Max. Temp. (°F)	42	46	59	61	69	68	48
Avg. Min. Humidity (%)	33	31	41	59	72	77	47
Avg. 20' Wind Speed (mph)	4	4	6	5	5	10	8
Avg. Wind Direction*	NW	W	SW	SW	SSW	SSW	NW
Avg. Probability of Precip. (%)	0	0	13	45	57	64	13
Days Since a Wetting Rain**	11.5	12.5	13.5	14.5			
Forecast ERC (Fuel Model X)	52.9	45.2	47.3	36.3	14.0	7.9	23.5
Forecast BI (Fuel Model X)	105.3	75.6	103.0	74.7	44.7	25.7	52.4
Forecast IC (Fuel Model X)	7.9	3.9	7.0	4.3	1.7	0.6	2.0
Forecast 100-Hr. FMC	17.4	16.9	16.3	16.0	16.7	19.4	20.1
Forecast 1000-Hr. FMC	23.0	22.9	22.8	22.6	22.3	22.2	22.1
KBDI	436.0						

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

Data Source:

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

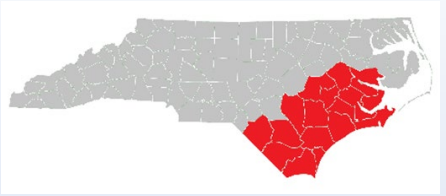
Values in the table above are averages from 4 stations in this FDRA:

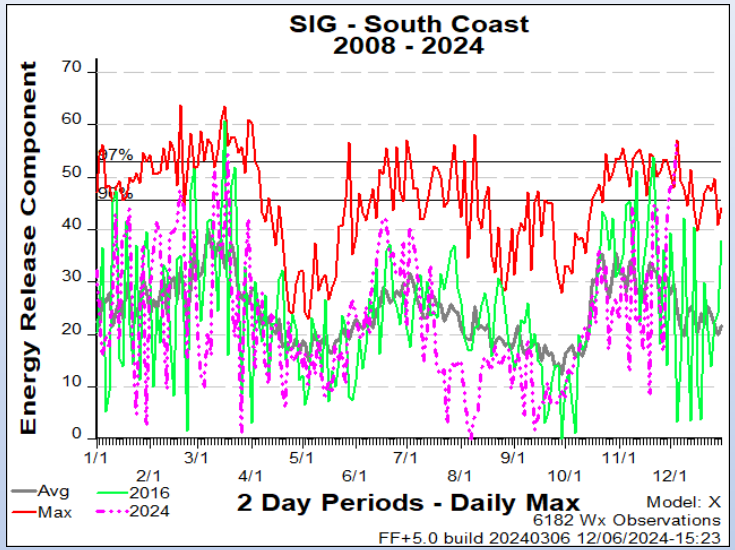
- **Elizabeth City** (311503)
- **Greens Cross** (313001)
- **Pocosin Lakes** (315201)
- **Fairfield** (317901)

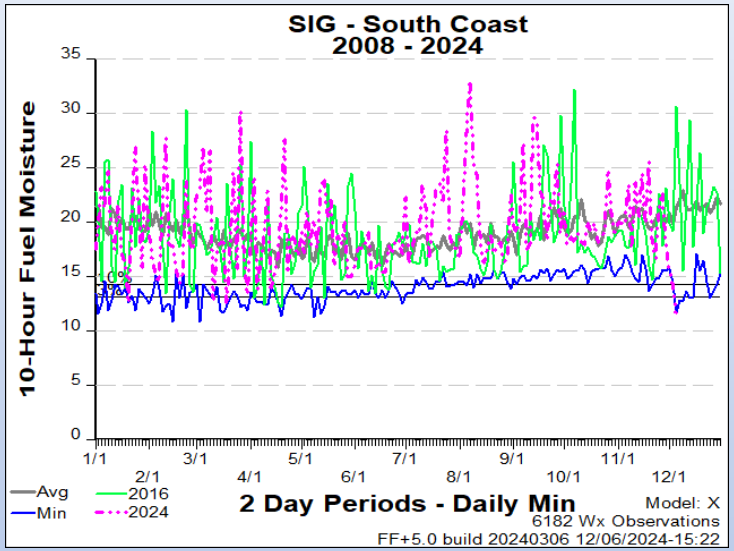
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 45°F	Between 45°F and 55°F	Greater than 55°F
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 10 mph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

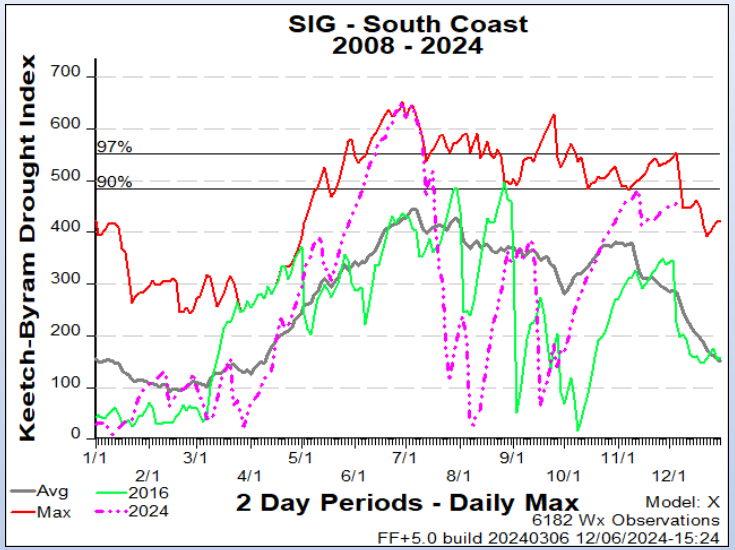
Other factors to consider when determining fire danger: **sky conditions, precipitation amount, number of days since rain,** and **season**

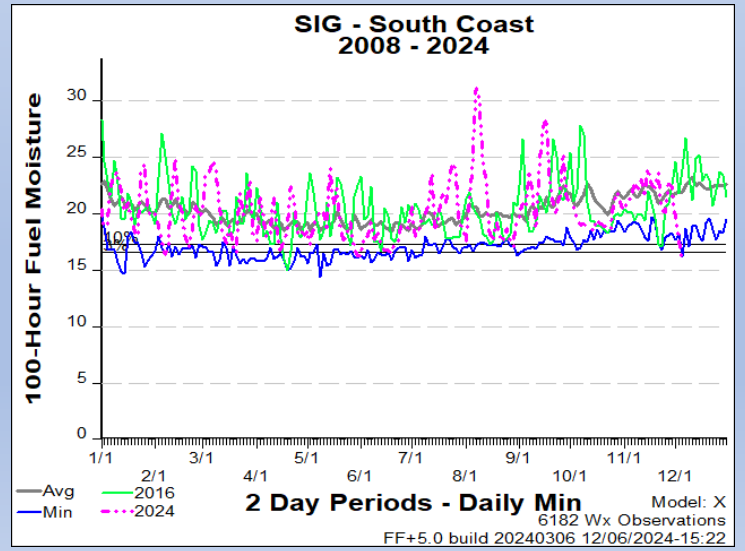
FDRA – South Coast

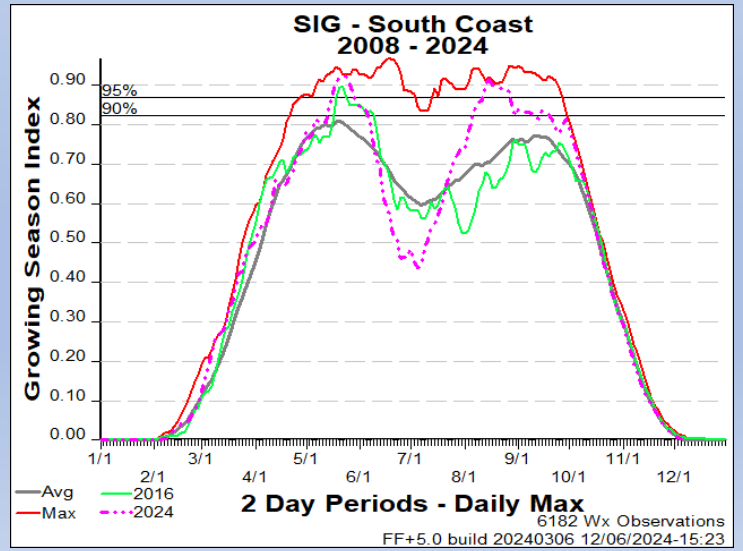


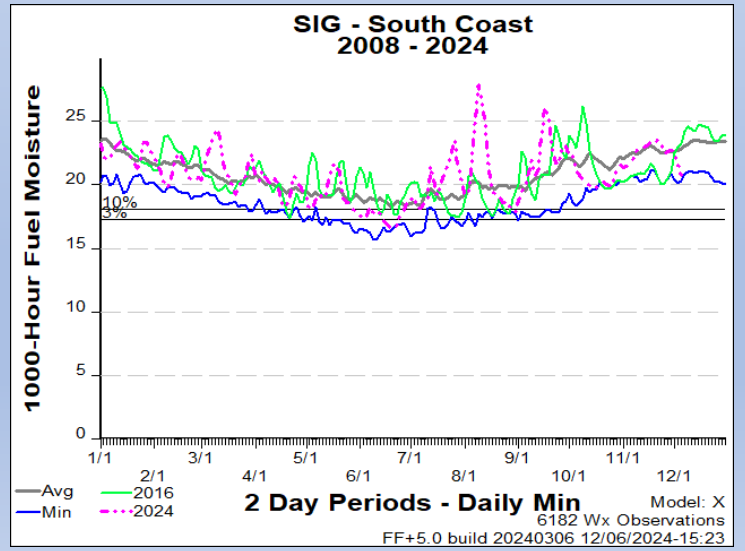












Weekly Outlook

Southern Coastal FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

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

DAY	FRI 06-Dec	SAT 07-Dec	SUN 08-Dec	MON 09-Dec	TUE 10-Dec	WED 11-Dec	THU 12-Dec
Avg. Max. Temp. (°F)	43	49	61	63	72	68	50
Avg. Min. Humidity (%)	28	28	39	58	74	78	47
Avg. 20' Wind Speed (mph)	3	3	4	4	4	8	6
Avg. Wind Direction*	NW	W	SW	SW	SSW	SSW	NW
Avg. Probability of Precip. (%)	0	0	15	42	61	65	10
Days Since a Wetting Rain**	16.1	17.1	18.1	19.1			
Forecast ERC (Fuel Model X)	56.7	48.9	49.2	39.0	15.8	8.4	28.3
Forecast BI (Fuel Model X)	98.4	79.7	87.7	71.6	42.9	29.9	65.2
Forecast IC (Fuel Model X)	8.4	4.8	6.4	4.6	1.8	0.7	3.0
Forecast 100-Hr. FMC	17.1	16.6	16.0	15.7	16.6	19.3	20.0
Forecast 1000-Hr. FMC	23.8	23.7	23.5	23.3	22.9	22.9	22.5
KBDI	454.4						

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

Data Source:

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

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

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

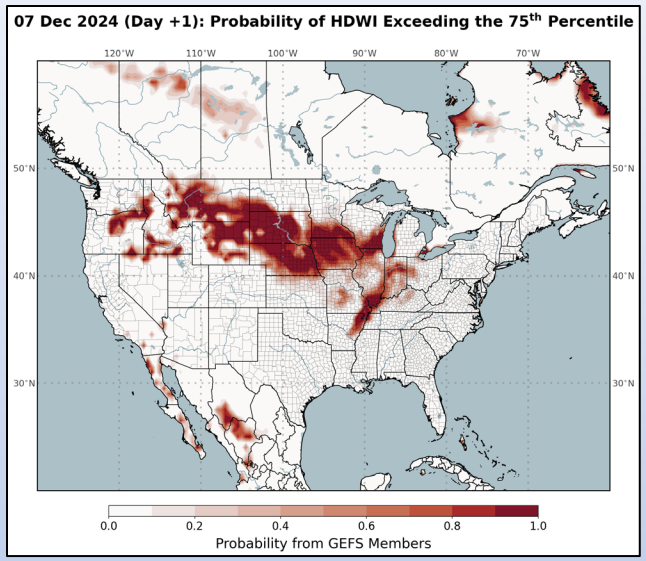
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 50°F	Between 50°F and 65°F	Greater than 65°F
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 5 mph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

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

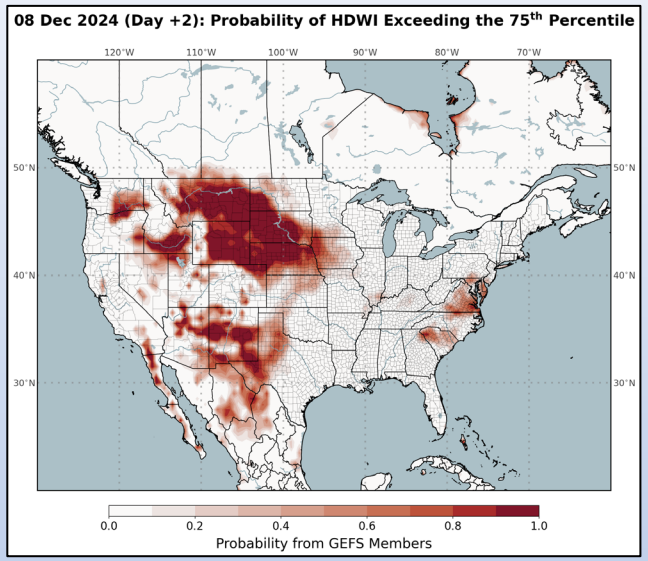
Statewide Slides

Hot-Dry-Windy Index (HDW)

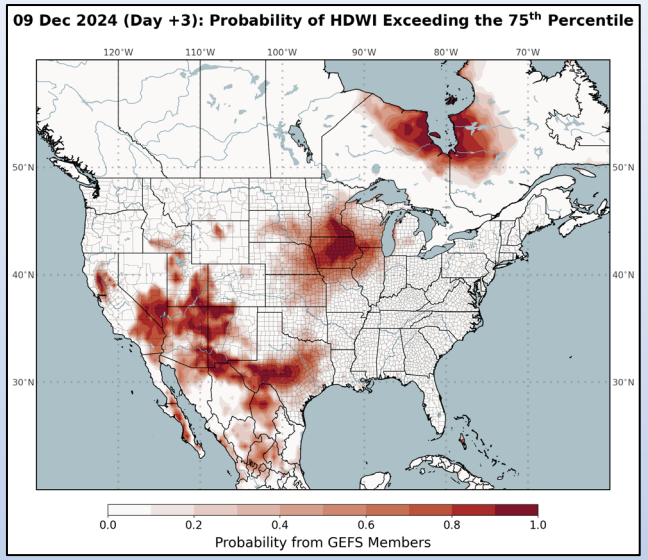
Saturday > 75th Percentile



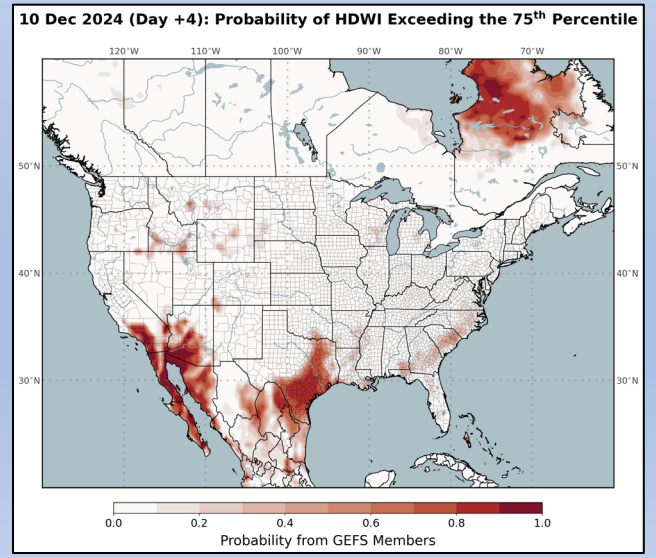
Sunday > 75th Percentile



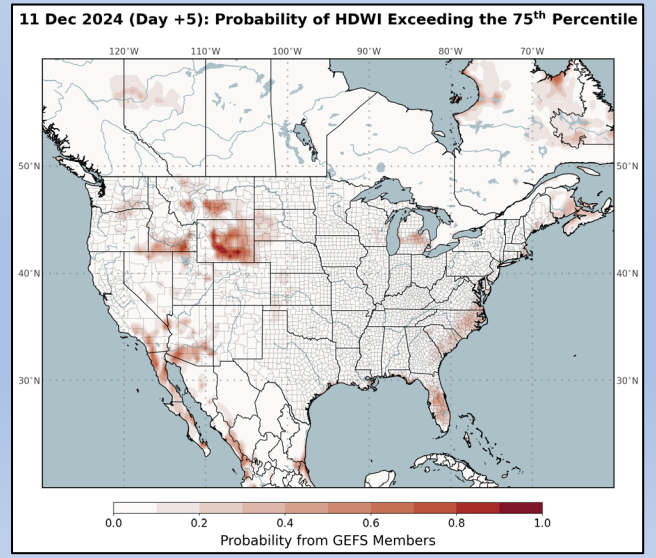
Monday > 75th Percentile



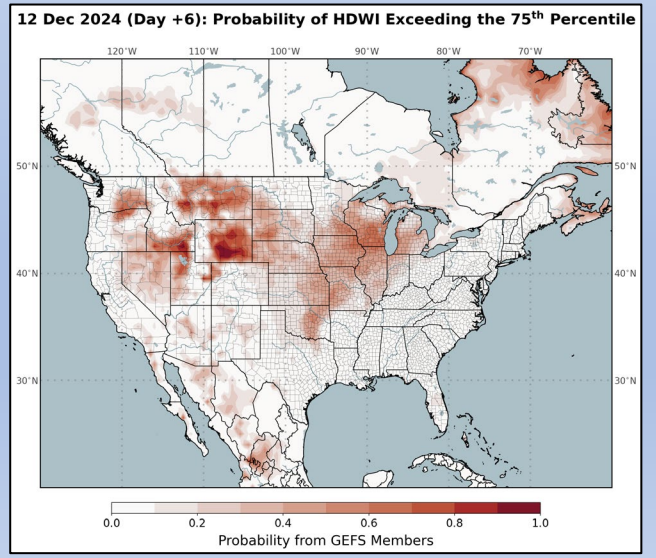
Tuesday > 75th Percentile



Wednesday > 75th Percentile



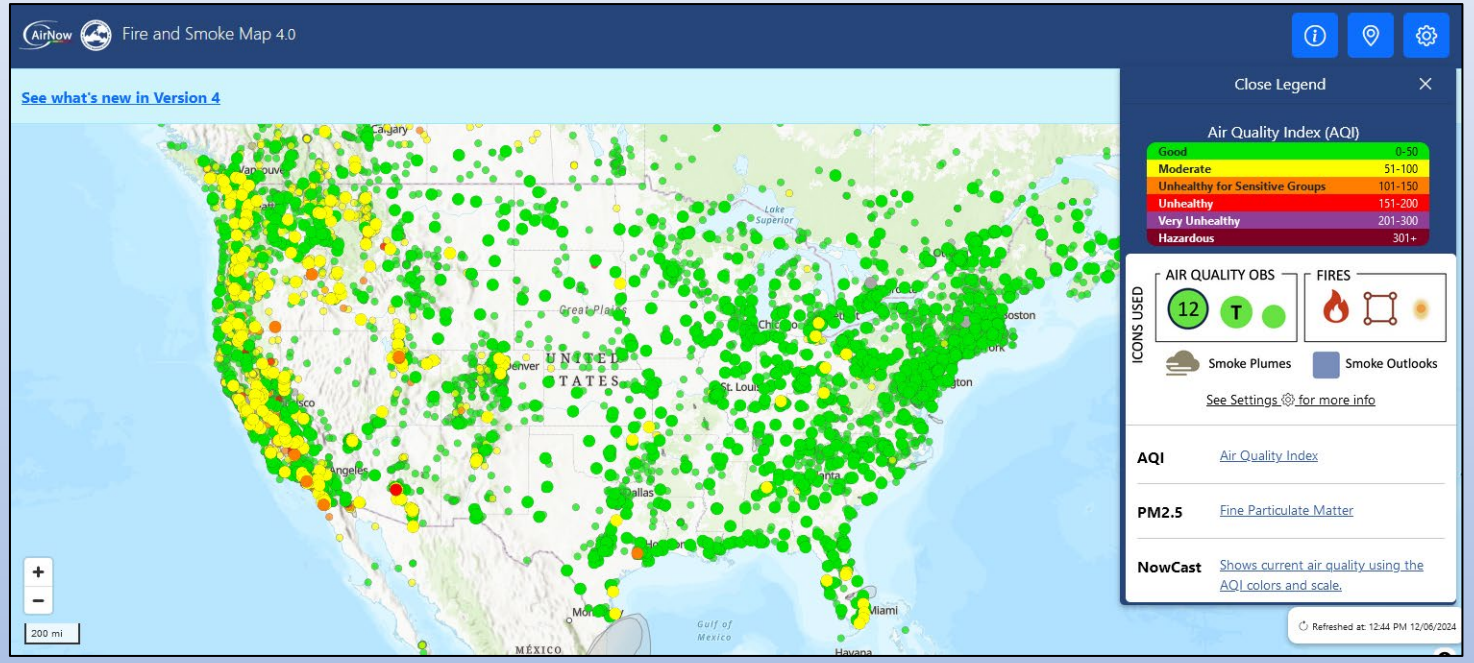
Thursday > 75th Percentile



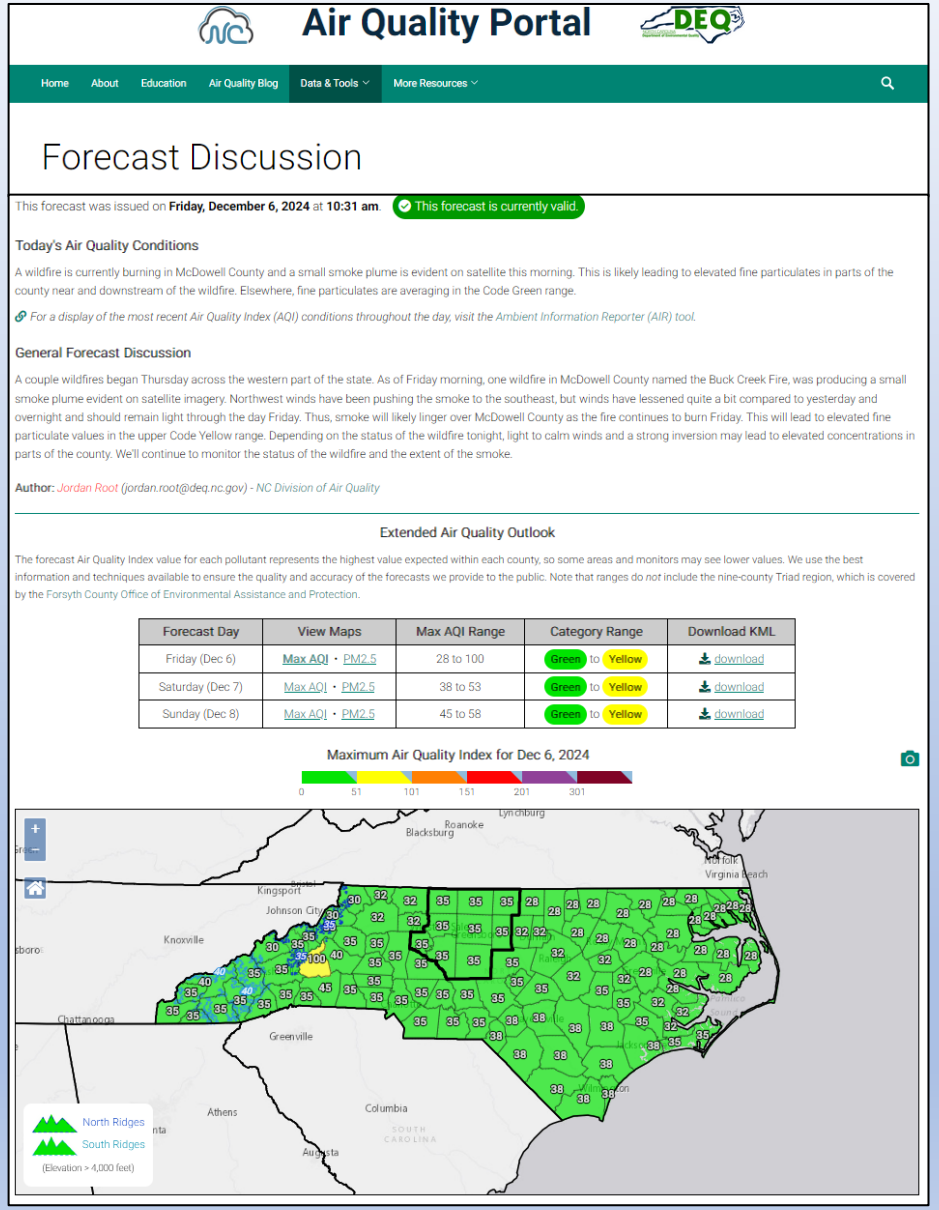
- Another visualization tool to pick up on broader weather, but with *limitations
- Only uses Max VPD (atmospheric moisture & temp) & Max Wind Speed to generate outputs
- Coarse Resolution - 0.5 Degree Grid
- **<u>No</u> Account of Local Fuel Conditions & Topo Influences**

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

Air Quality Notes



https://fire.airnow.gov/#



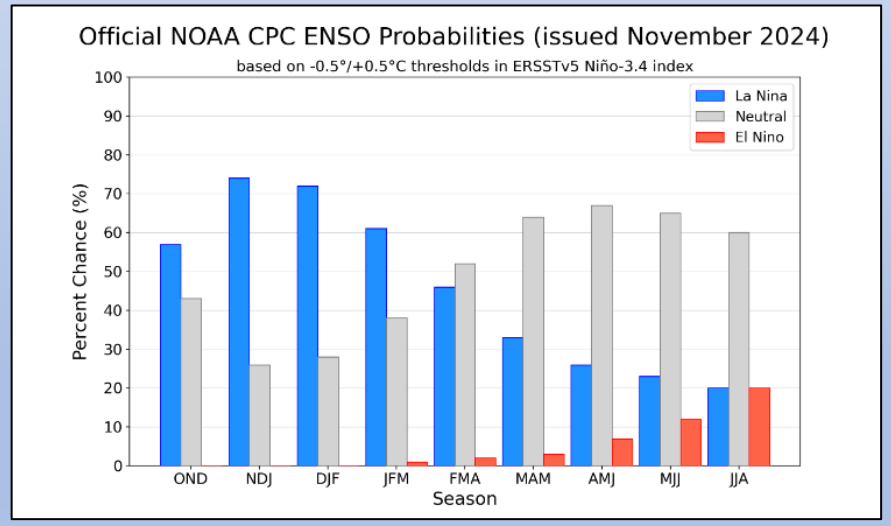
https://airquality.climate.ncsu.edu/discussion/?view=latest

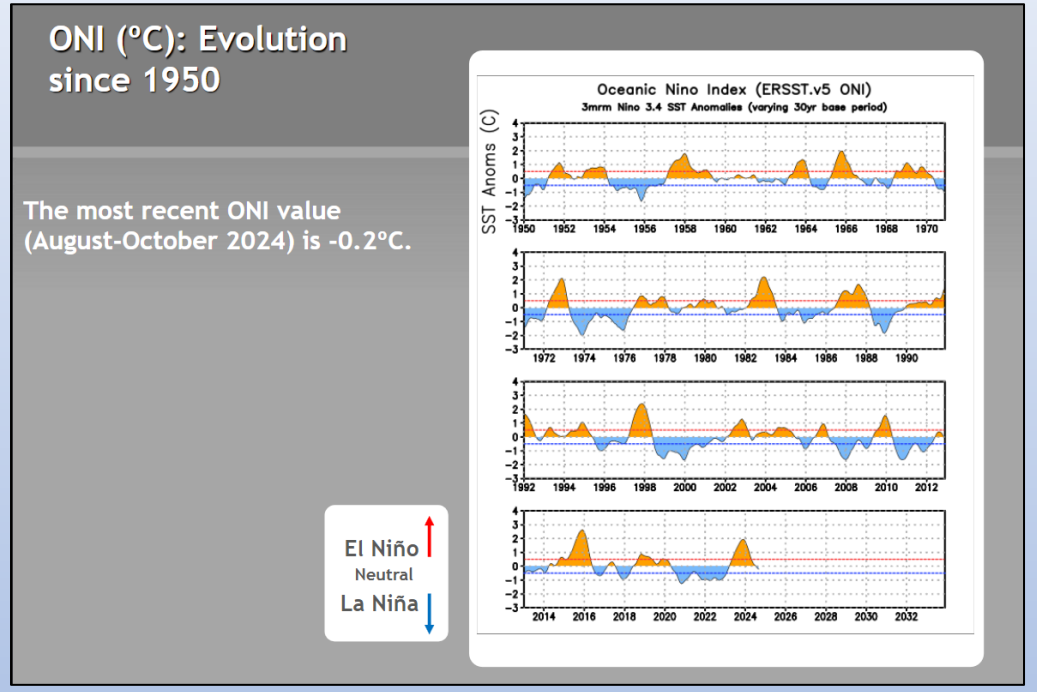
ENSO Notes from the CPC (11/14/24 Update)

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

La Niña is most likely to emerge in October-December 2024 (57% chance) and is expected to persist through January-March 2025.

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





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

[The IRI plume predicts a weak and a short duration La Niña, as indicated by the Niño-3.4 index values less than -0.5°C [Fig. 6]. The latest North American Multi-Model Ensemble (NMME) forecasts are cooler than the IRI plume and predict a weak La Niña. Due to this guidance and La Niña-like atmospheric circulation anomalies over the tropics, the team still favors onset of La Niña, but it is likely to remain weak and have shorter duration than other historical episodes. A weak La Niña would be less likely to result in conventional winter impacts, though predictable signals could still influence the forecast guidance (e.g., CPC's seasonal outlooks). In summary, La Niña is most likely to emerge in October-December 2024 (57% chance) and is expected to persist through January-March 2025 [Fig. 7].]

See this link for further discussion: https://www.climate.gov/news-features/blogs/enso/can-little-la-nina-pack-big-precipitation-punch

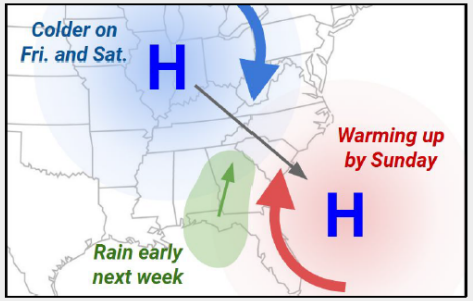
Slide Source: *https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.ppt*

State Climate Office: Short-Range Monthly Outlook for NC

Released 12/5/24 & Location: https://climate.ncsu.edu/fire/outlooks/

Short-Range Outlook for North Carolina

Week 1:
December 5 to 11, 2024



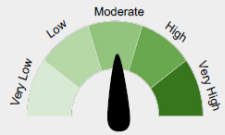
Chilly, Then Warmer

A reinforcing shot of cold air will arrive behind a cold front on Thursday night, dropping low temperatures into the 20s and highs into the 40s on Friday and Saturday. As winds shift out of the south by Sunday, we'll warm up into the 60s again early next week.

Rain Returns on Monday

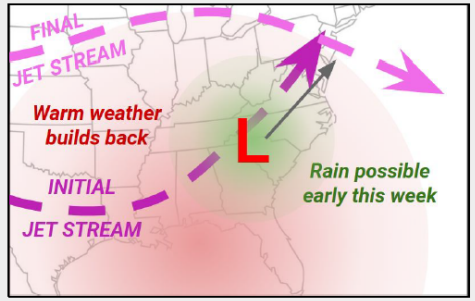
After a sunny and dry weekend, Gulf moisture will move in on Monday, with light rain showers expected across the state. A more significant system may follow it on Tuesday and Wednesday, with weekly totals of a half-inch to 2 inches expected statewide.

Forecast Confidence



The exact timing and rain amounts from the two systems next week is still coming into focus, but a widespread rain is likely.

Week 2:
December 12 to 18, 2024



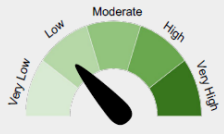
Mostly Warm This Week

To start the week, jet stream ridging along the east coast should put our temperatures slightly above normal. Later, a broader ridge should build in from the west, pushing us even warmer, maybe with highs in the 60s as we cross the midpoint of December.

An Early Rain Event

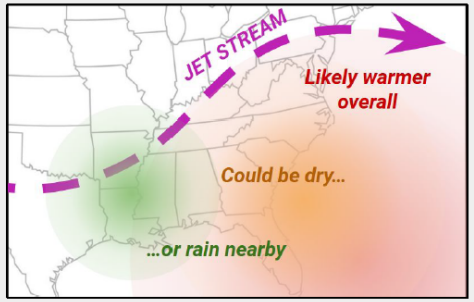
Under the initial ridging pattern, the storm track will be close by, and recent model runs have shown at least one rain-making system moving through early this week. After that, expect a transition to drier weather as the more expansive ridge moves over us.

Forecast Confidence



Recent guidance has been in better agreement about the overall pattern, but with lots of uncertainty about the details for this week.

Weeks 3-4:
Dec. 19, 2024 to Jan. 1, 2025



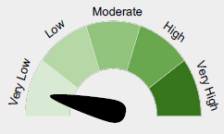
Probably Warm in Our Region

The exact evolution of our patterns is tough to predict after an uncertain Week 2, but longer-term forecasts show overall warmer-than-normal temperatures across the Southeast, consistent with global patterns such as the developing La Niña.

A Cloudy Precipitation Outlook

A warmer La Niña-like pattern would generally be drier in our region as well, but given the variability early in the month, we can't rule out more systems infused with Gulf moisture continuing to reach us later as well, which could bring semi-regular rainfall.

Forecast Confidence



The volatility of recent model runs makes this late-month outlook tough to pin down, aside from a tilt toward warm weather.

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

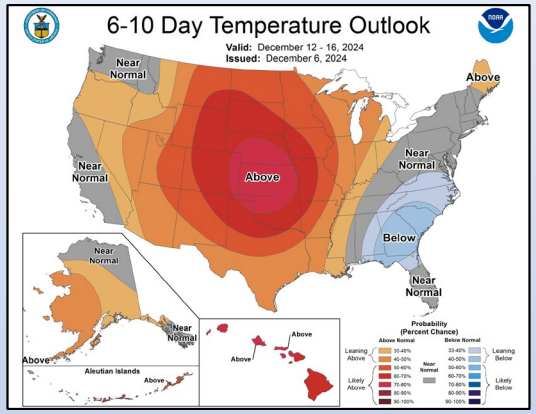
Author: Corey Davis (NCSCO)
cndavis@ncsu.edu

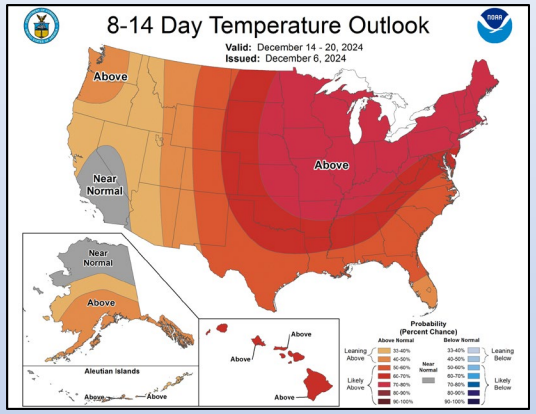
NORTH CAROLINA CLIMATE OFFICE

Supported by:

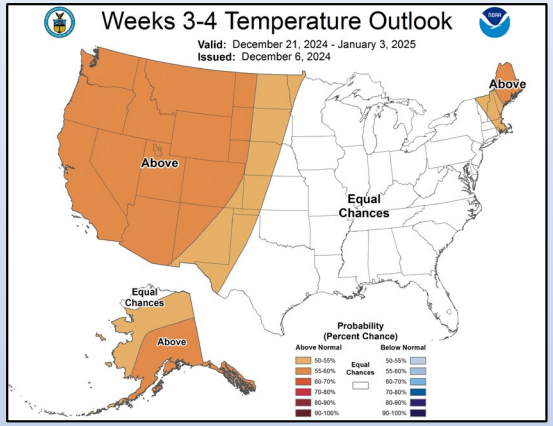
CPC Temp & Precip Outlook

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

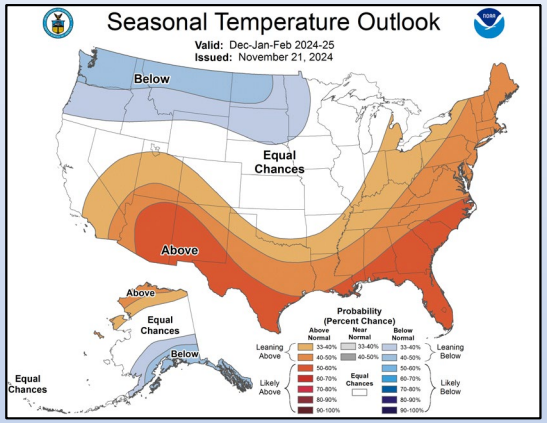


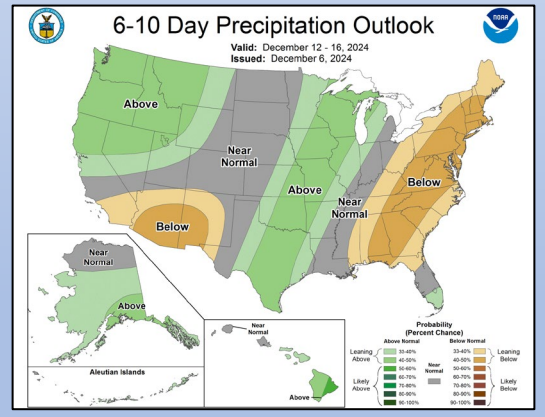


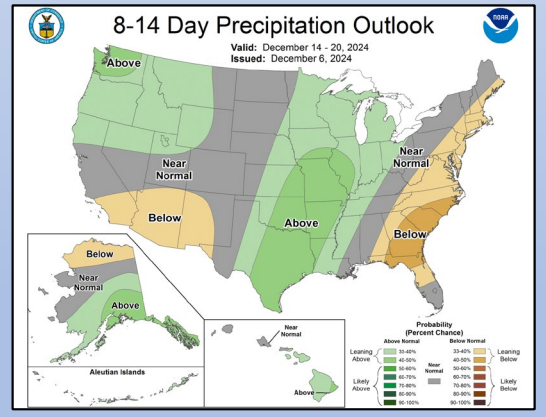
Updated 12/6/24

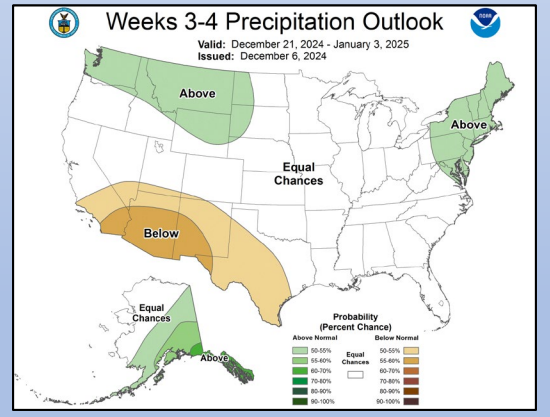


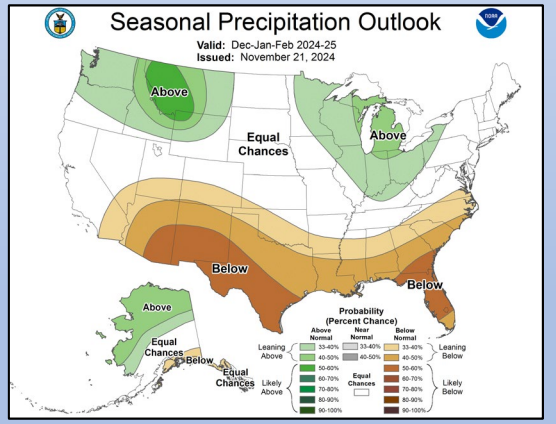
Updated 11/21/24 – [Discussion Link]









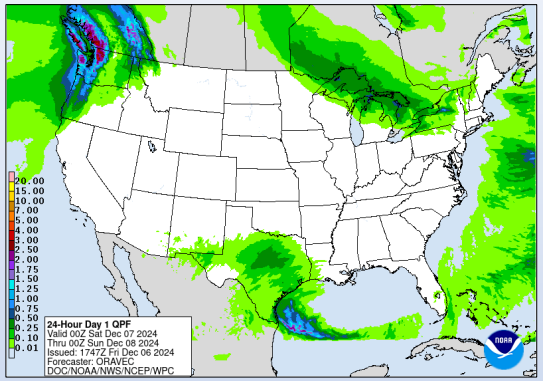


Source: https://www.cpc.ncep.noaa.gov/

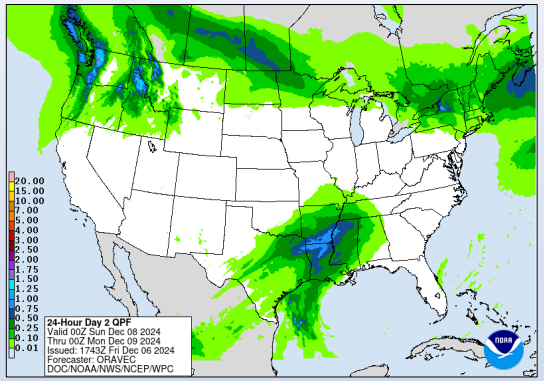
Quantitative Precipitation Forecast, 7-Day

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

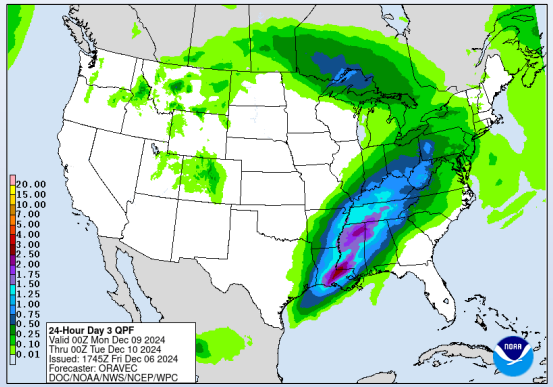
Day - 1



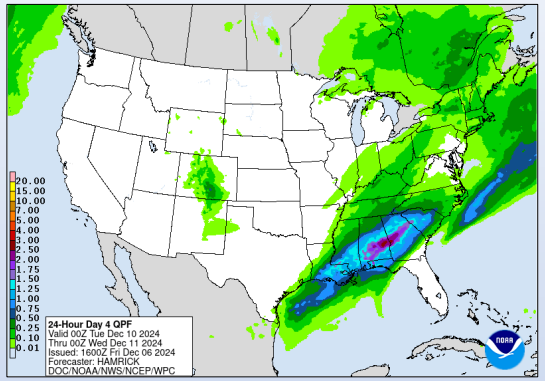
Day - 2



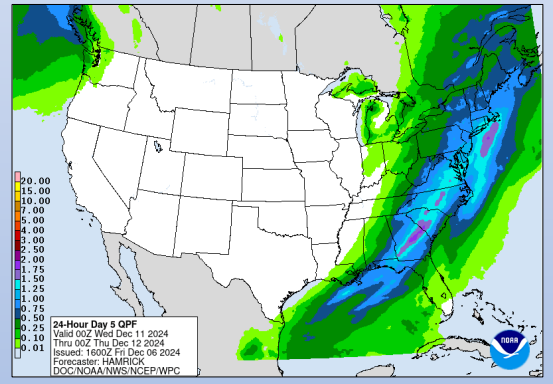
Day - 3



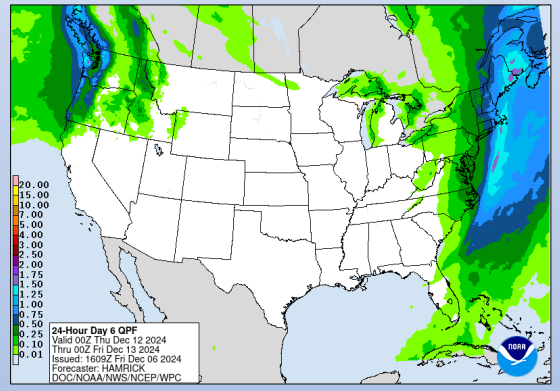
Day - 4



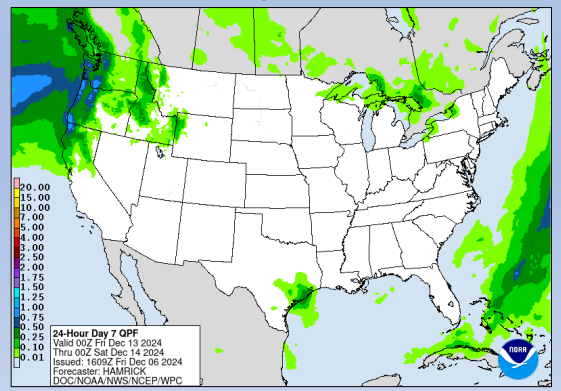
Day - 5



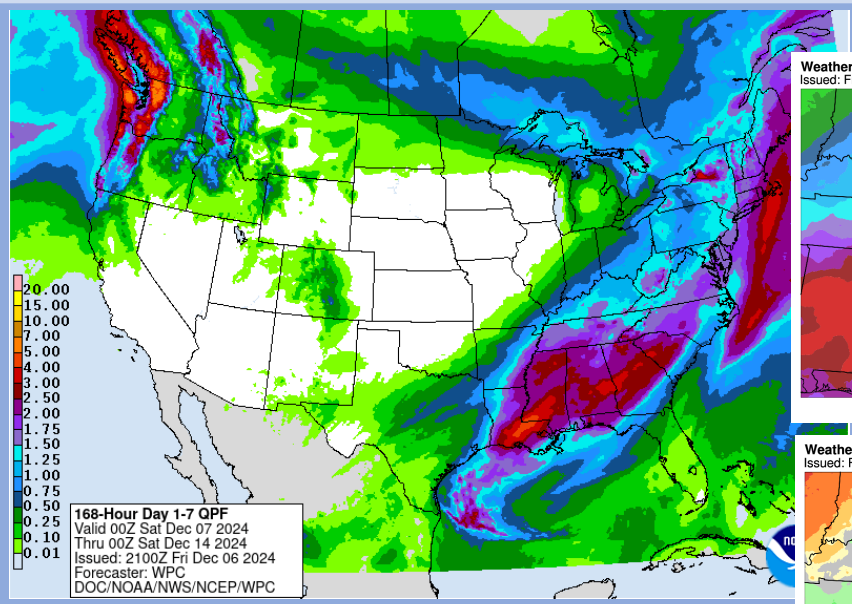
Day - 6

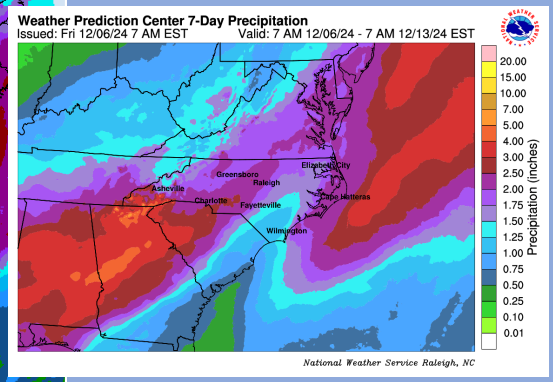


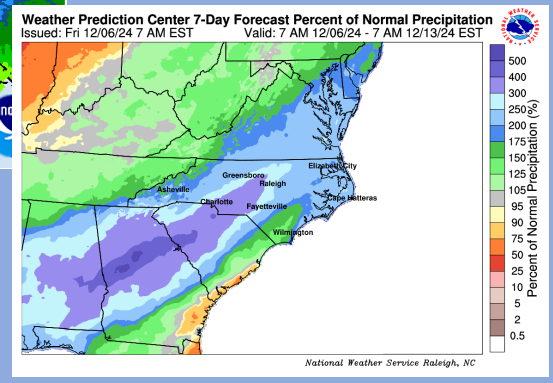
Day - 7



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



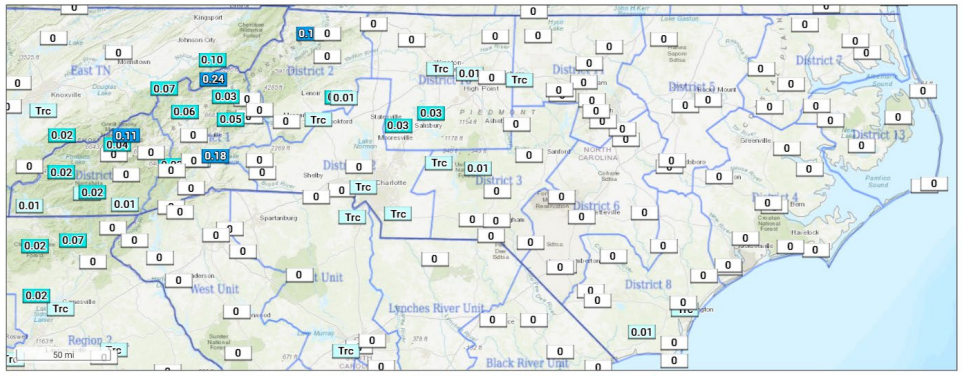




https://www.weather.gov/rah/qpf

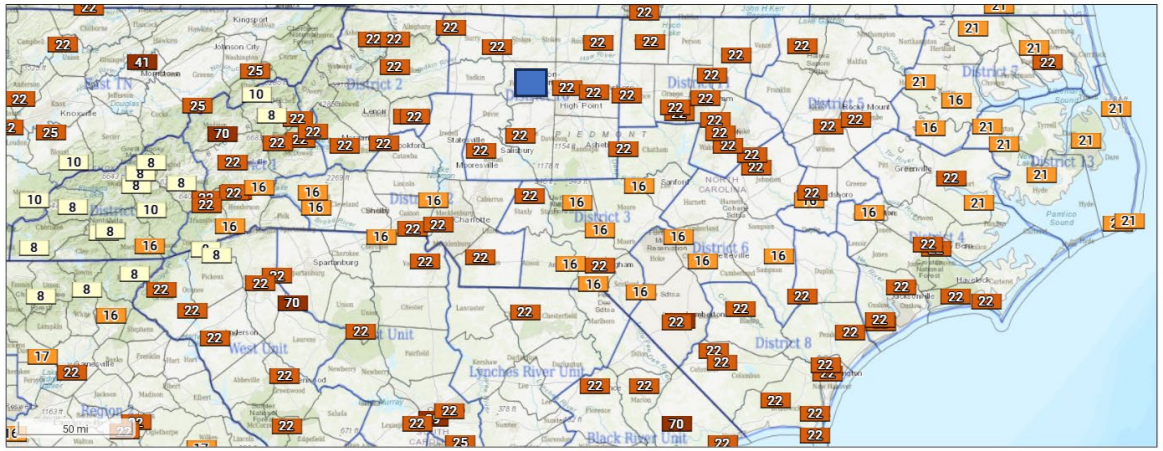
Observed Precipitation

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

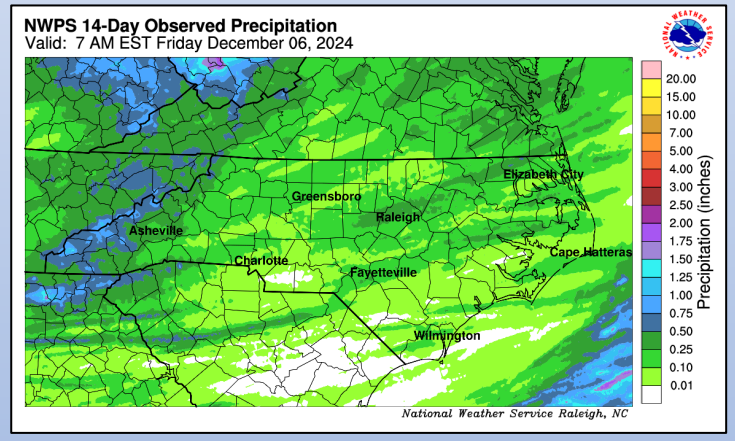


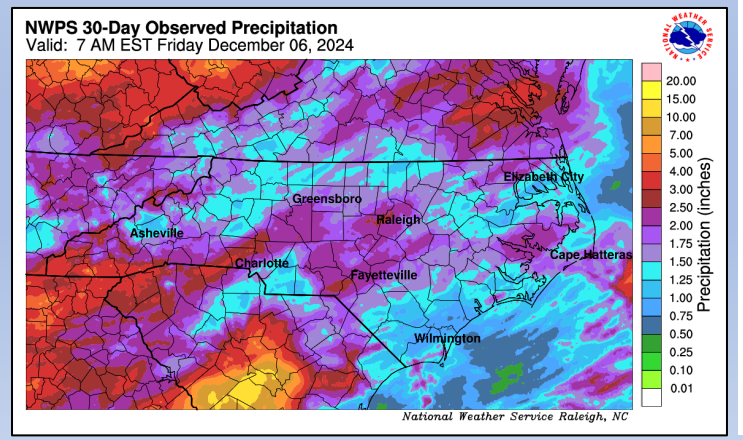
7-Day Precip Totals

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

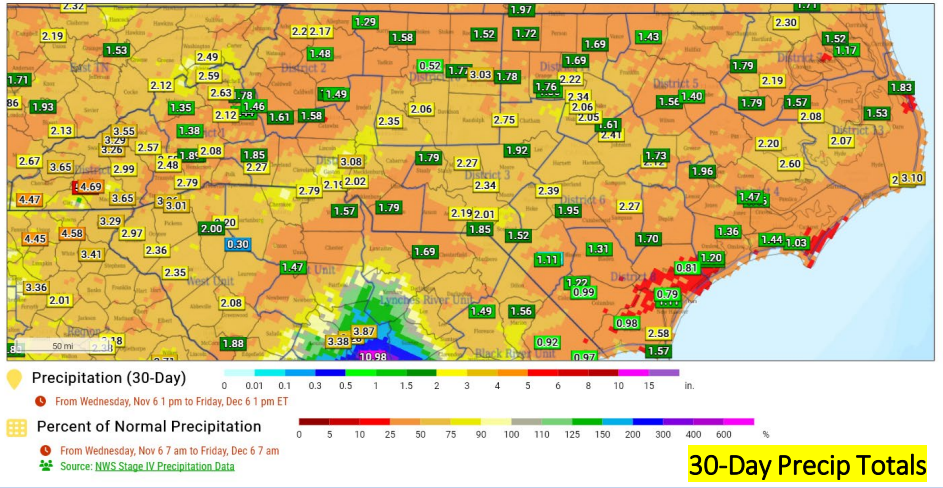


Days Since ≥ 0.50” Rain Event





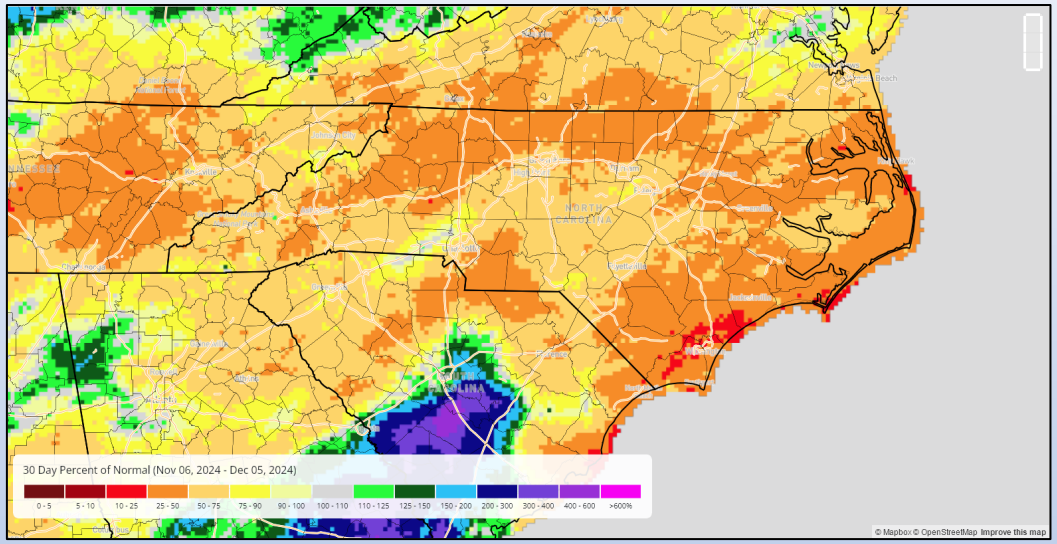
From the Fire Weather Intelligence Portal • *climate.ncsu.edu/fwip*



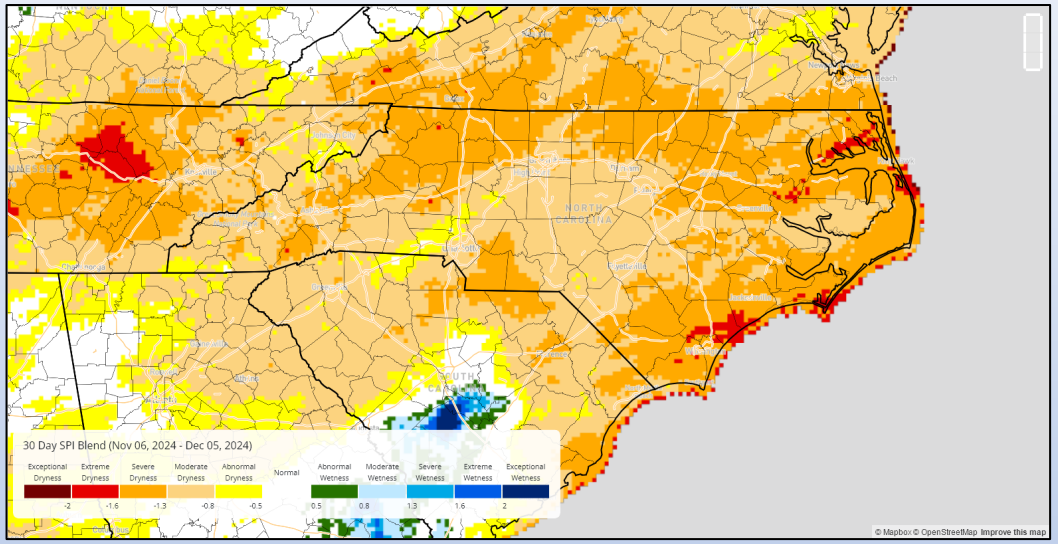
30-Day Precip Totals

Comparing Observed Precip to 30-Yr Normals, *SRCC* *(Ending 12/5/24)*

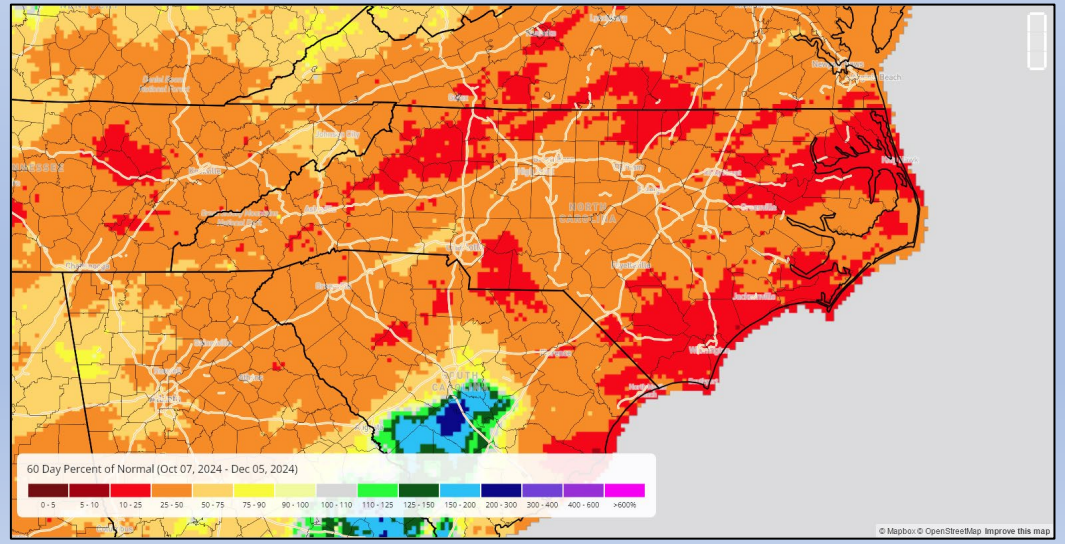
30-Day % of Normal



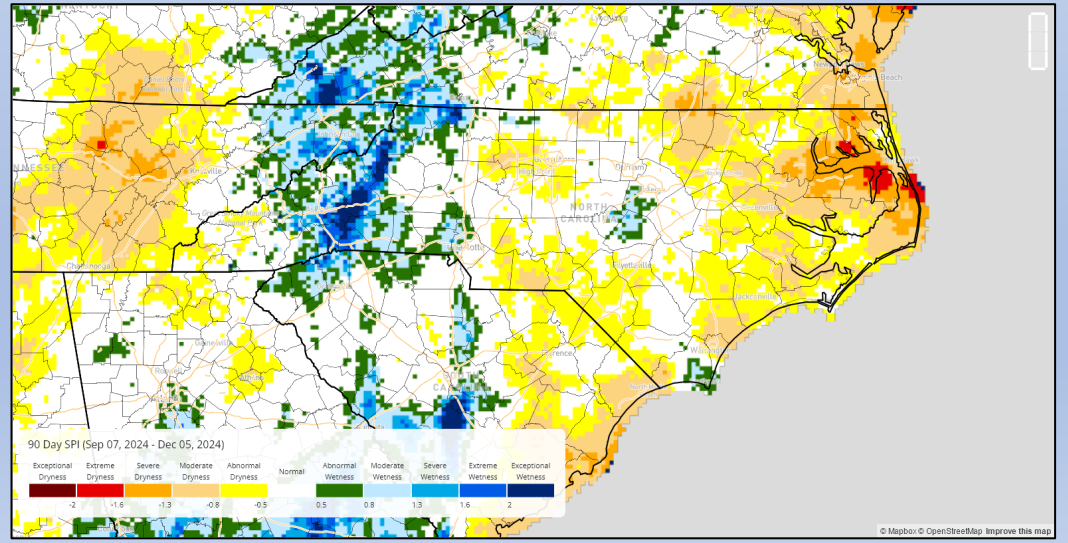
30-Day SPI Blend



60-Day % of Normal

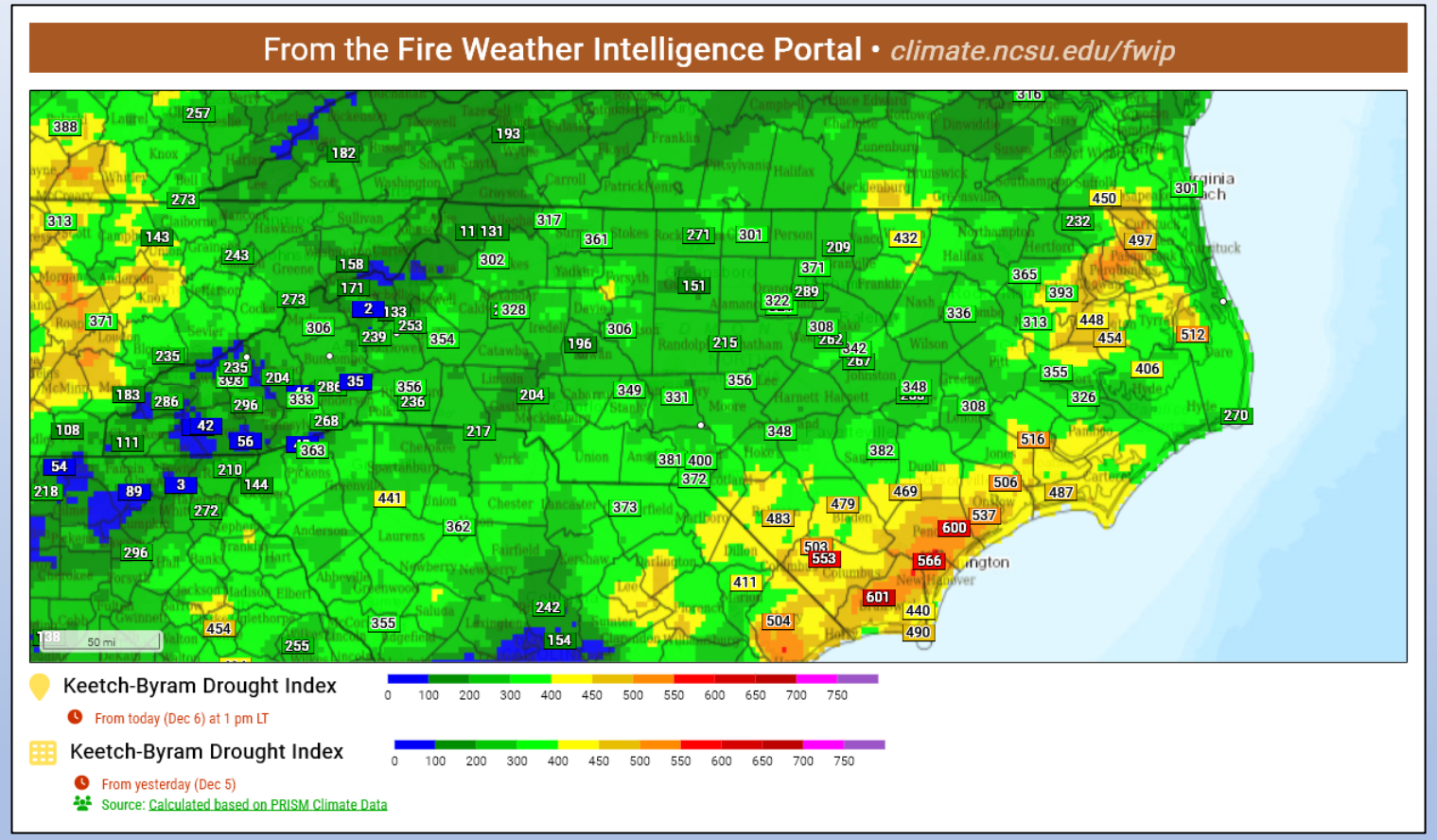


90-Day SPI

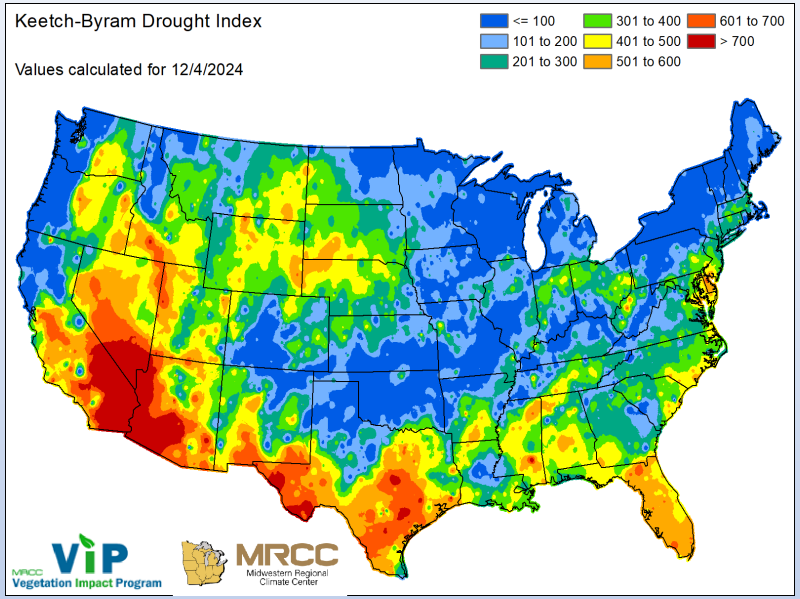


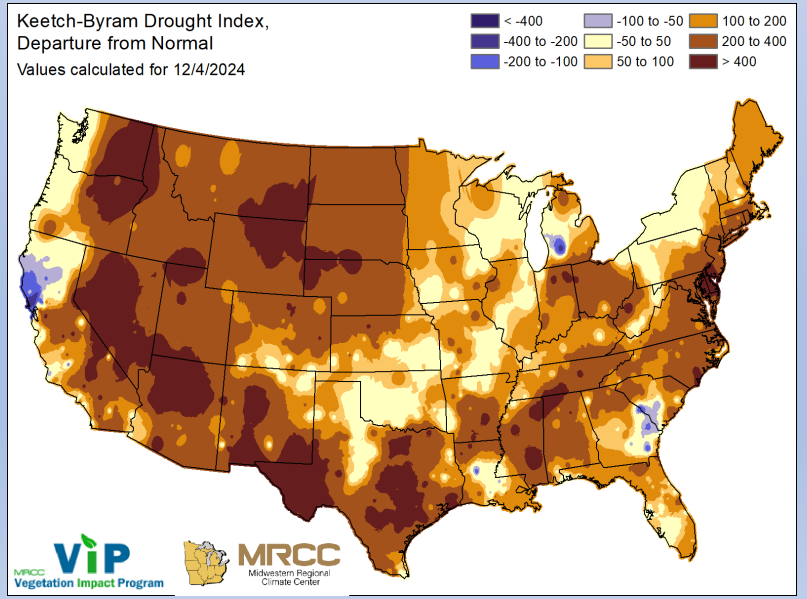
https://srcc.tamu.edu/water_portal/

KBDI - Station Points *FWIP (Point calculation from WIMS @ 1300 on 11/6/24)*

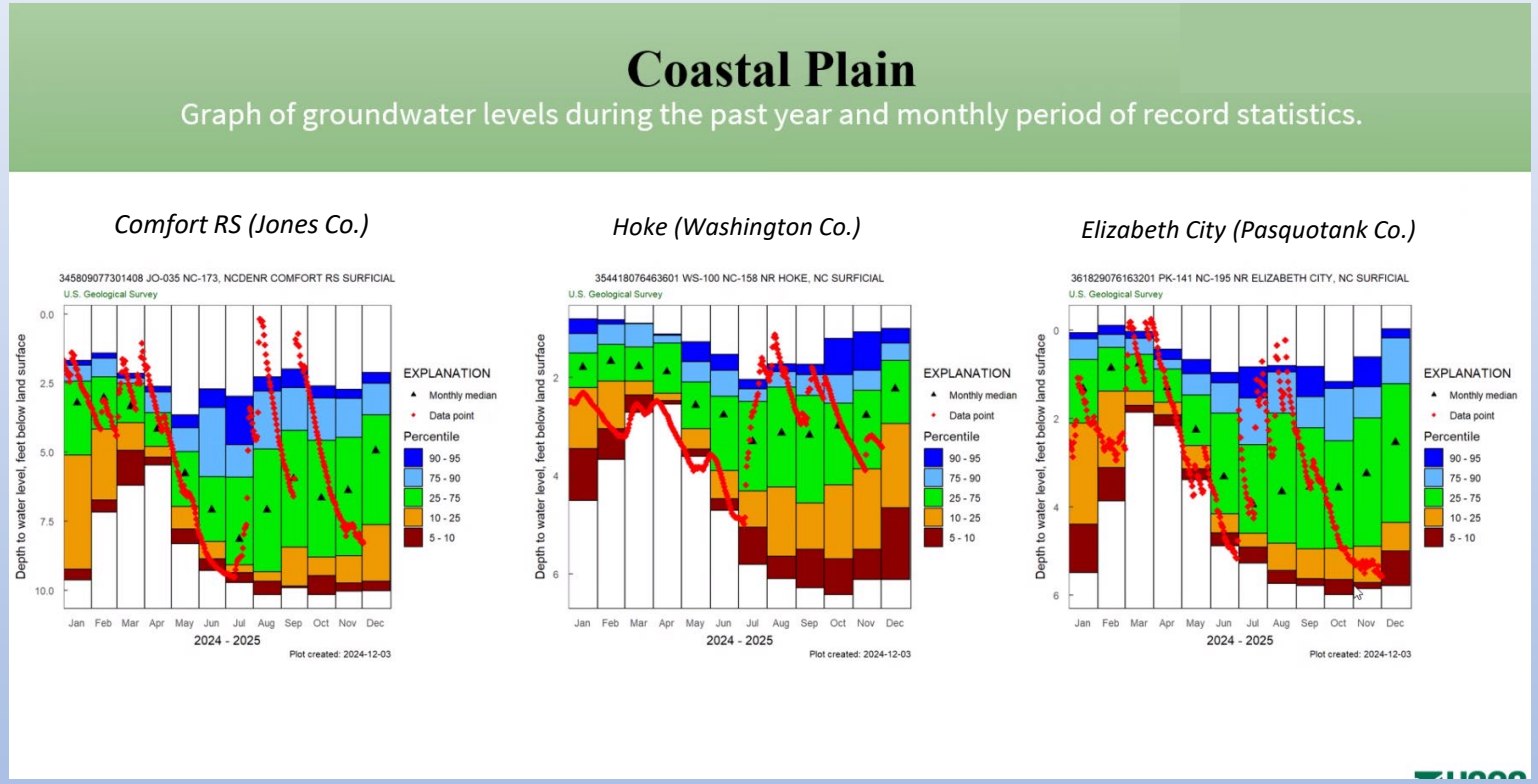


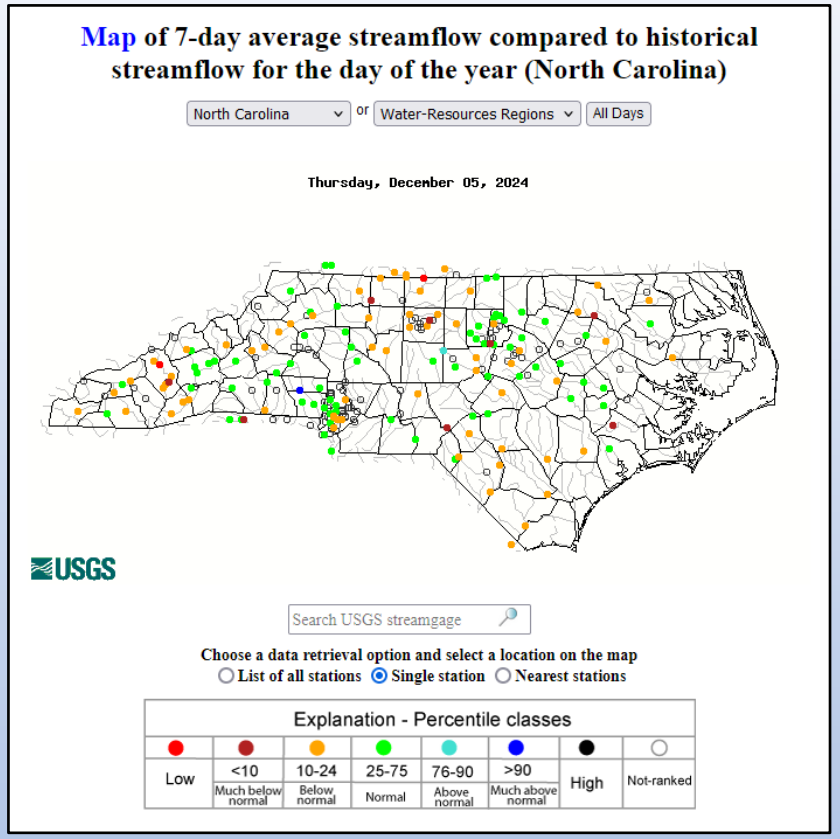
Product below is created by the Midwestern Regional Climate Center. See FAQ.





General Statewide Streamflow & Surficial Groundwater Well Monitoring at Coast



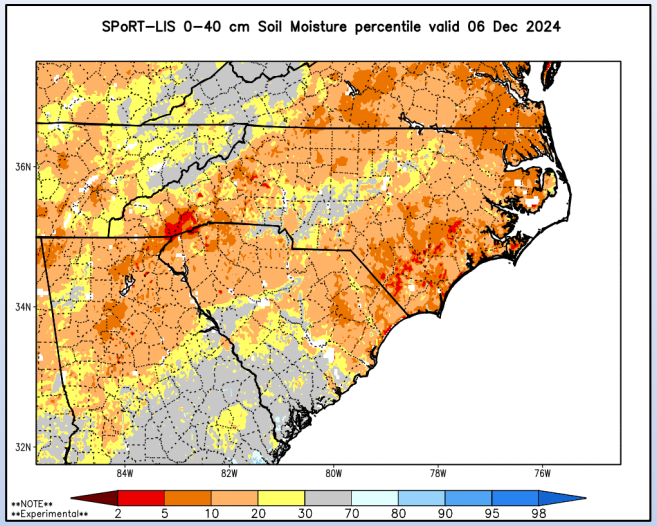


Source: https://waterwatch.usgs.gov/index.php?m=pa07d&r=nc&w=map

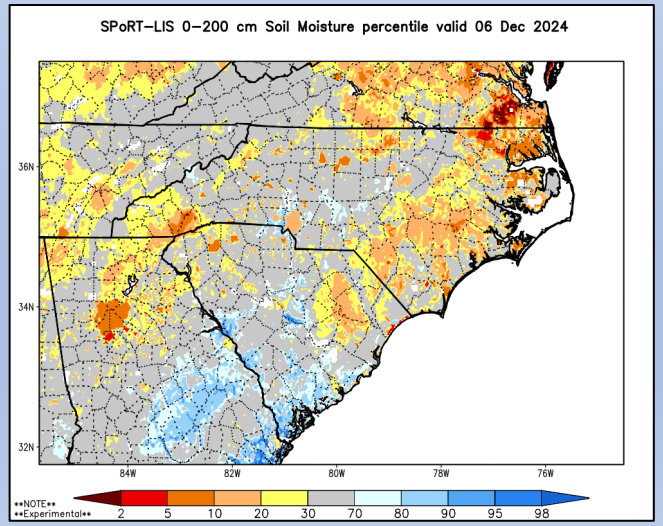
- Gauged streamflow continues a slow decline, with more in the “below normal” range as compared to last month for 7-day average flow.
- Three Coastal Plain monitoring wells – note that Elizabeth City is running near record minimum for the month.

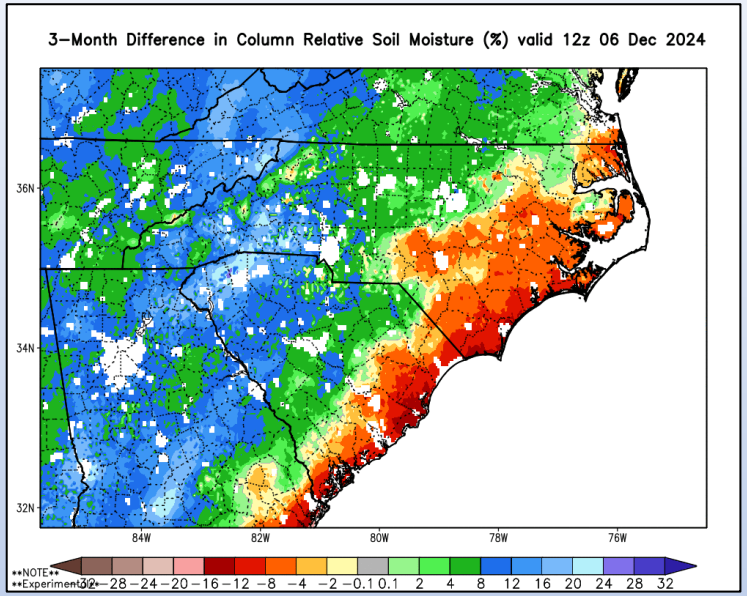
SPoRT Modeled Relative Soil Moisture & GVF

0-40 cm Depth

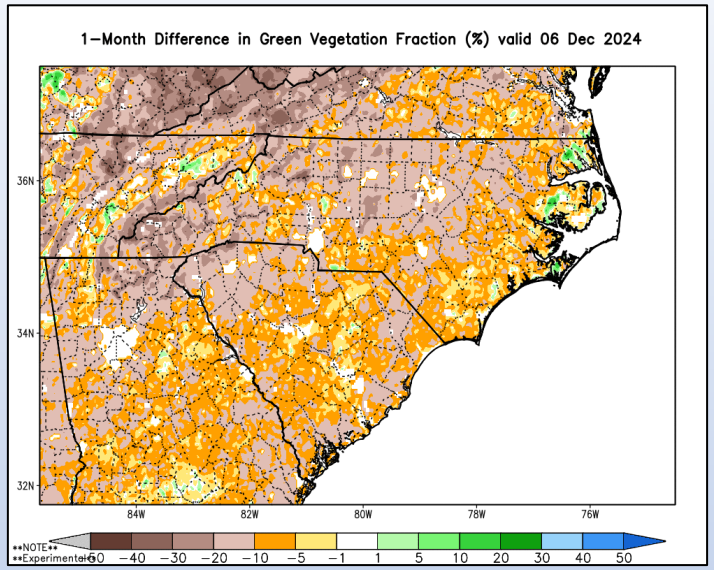


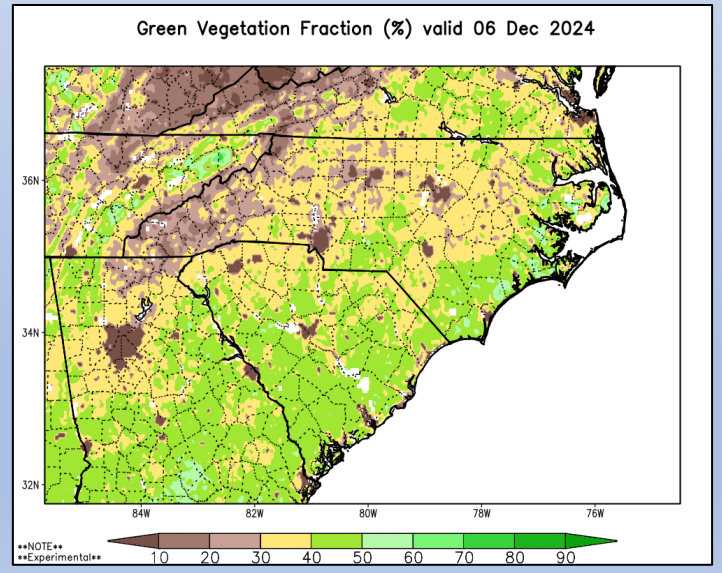
0-200 cm Depth





- See areas of **modeled** improvement & degradation near the surface and for the entire soil profile (left).
- The **"3-Month"** Soil Moisture Difference map shows Eastern drying along with input of Helene Rains in the West (center) still influencing the longer time scale.
- The Green Vegetation "1-Month Difference" map can provide useful context for various drought, seasonality & agricultural crop influences on the landscape as compared to the "Current GVF" map (right).



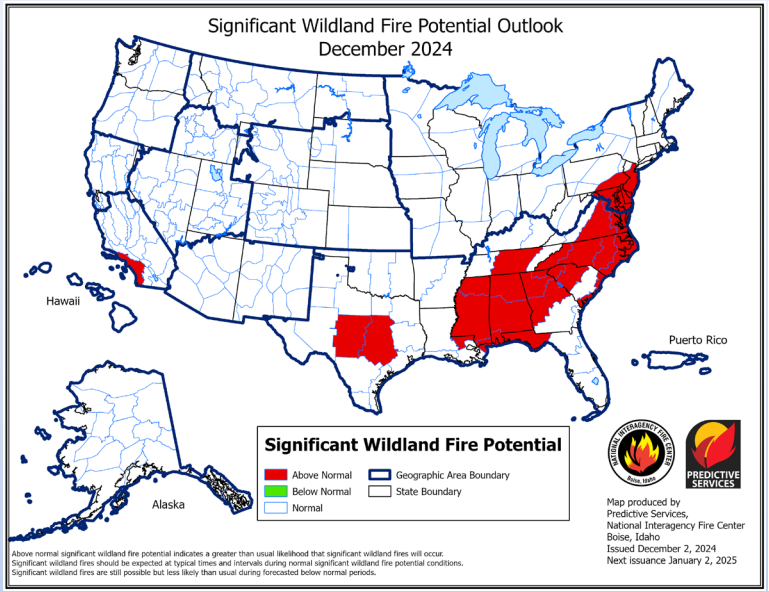


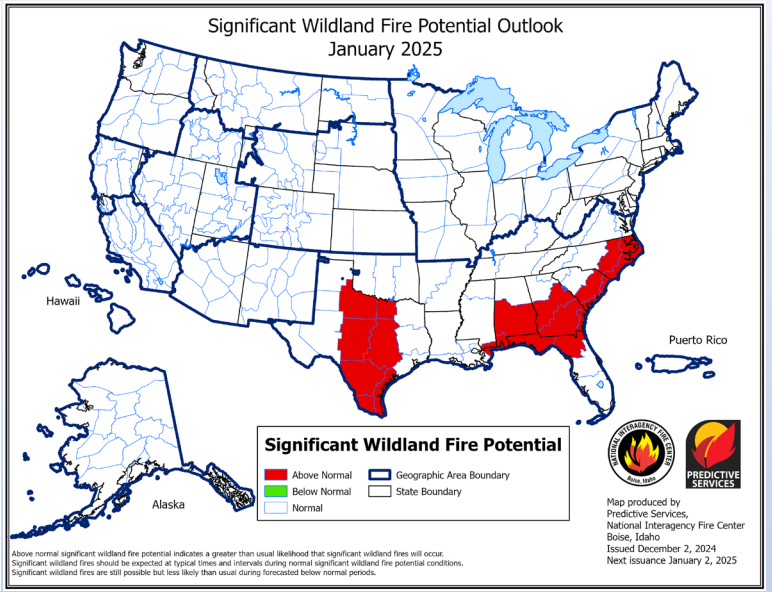
Source: https://weather.msfc.nasa.gov/sport/case_studies/lis_NC.html

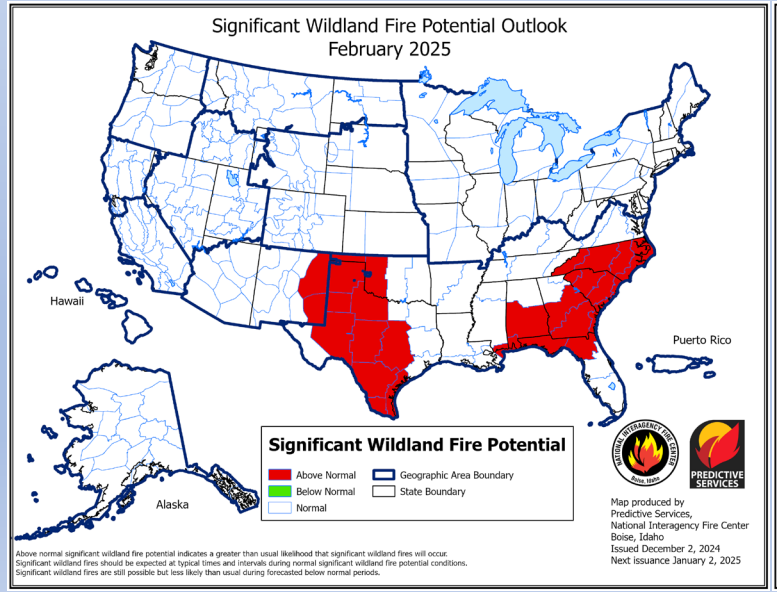
Significant Wildland Fire Potential Outlook:

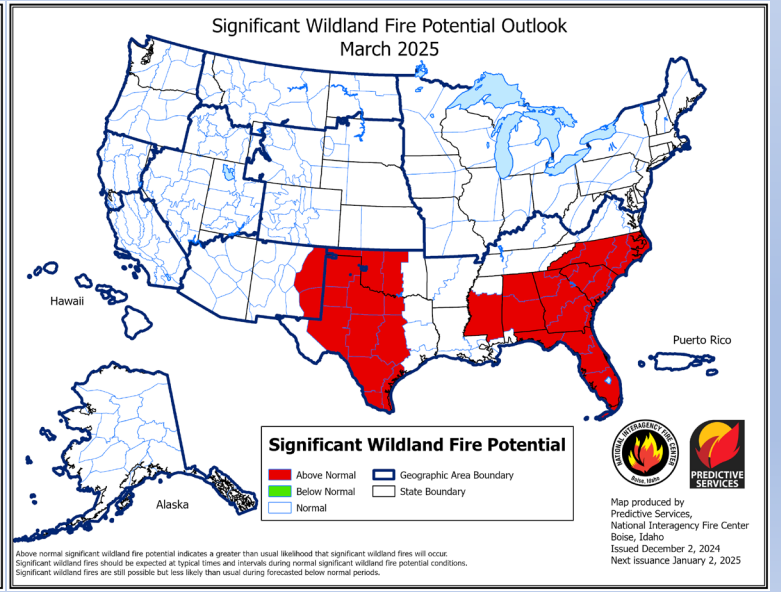
Updated 12/2/24 – Next Update on 1/2/25

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.



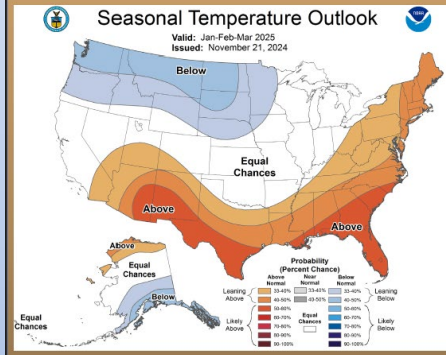


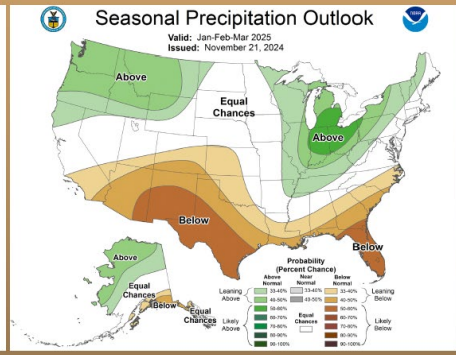




***Expansion of Above Normal for NC due to fuel loading, continued drought & likely La Nina influences, etc. See comments from SACC Briefing below relating to seasonal outlook discussion.**

January through March



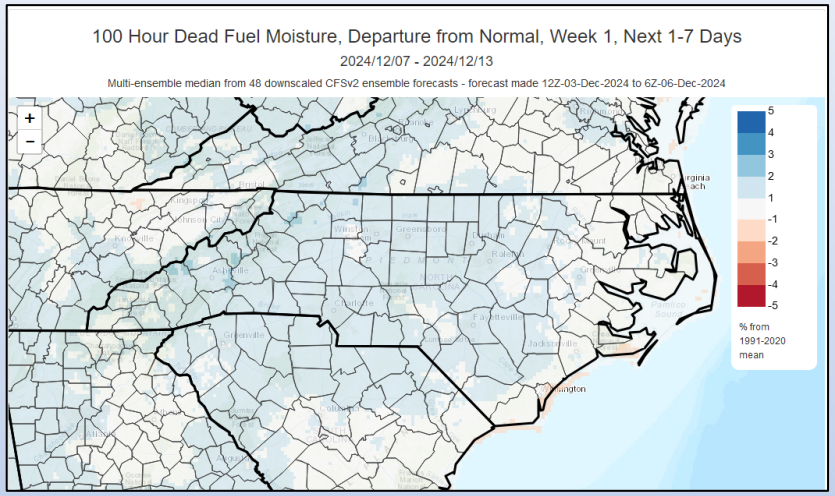


- CPC outlook and model guidance largely mirrors a moderate to strong La Nina, even if we never actually get there by old school measures
- Appalachians living on the edge in spring, resulting in lower confidence
- Coastal Southeast and Plains most likely to see warm and dry conditions on average
  - Certainly risks for extreme cold and snow again by January into February
- Drought expansion likely
- Warm Gulf plus La Nina likely spells trouble for winter and spring tornado outbreaks

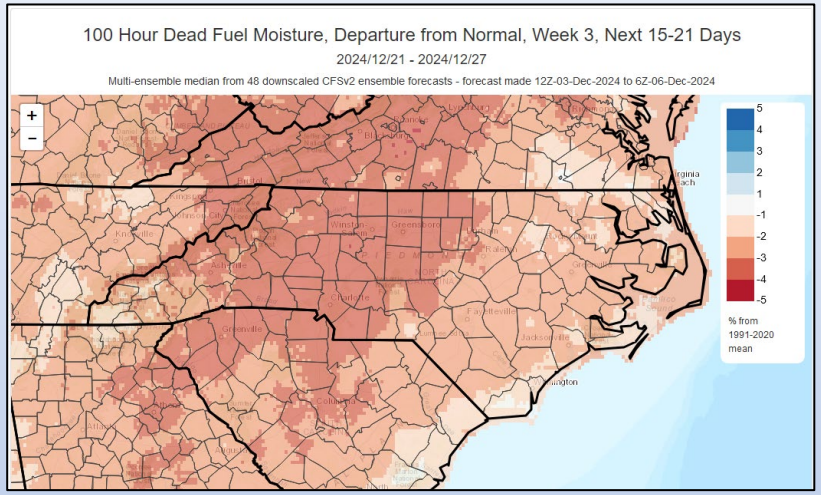
Modeled Departure from Normal by Week: 100-hr Fuels

Output relies on experimental forecast outputs and is subject to change

Week-1



Week-3

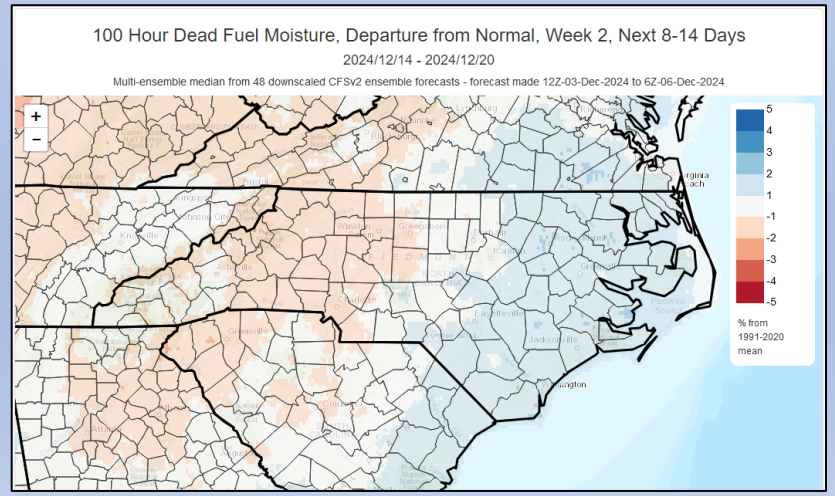


This output can provide insight into general drying trends and potential impacts to overall fire danger, especially prior to full green-up or in drought conditions. Outputs relate to interactions of warmer/colder temps, moist/dry air masses, precip amt/duration and overnight RH recovery trends.

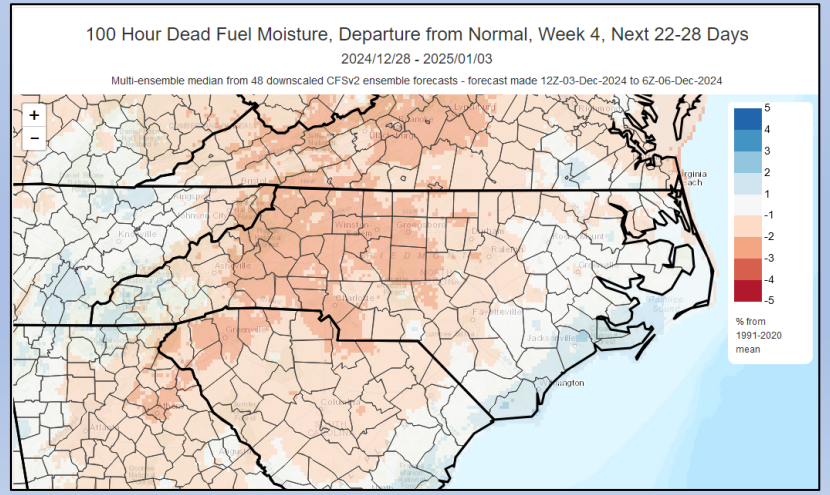
Note the <u>modeled</u> return of more "near normal" conditions in Weeks1-2 and then drier than normal conditions/areas increase moving into Weeks 3-4.

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