

# Weekly Fire Danger Assessment NCFS – All Regions

For Time Period:

Friday (3/29/24) to Thursday (4/4/24)

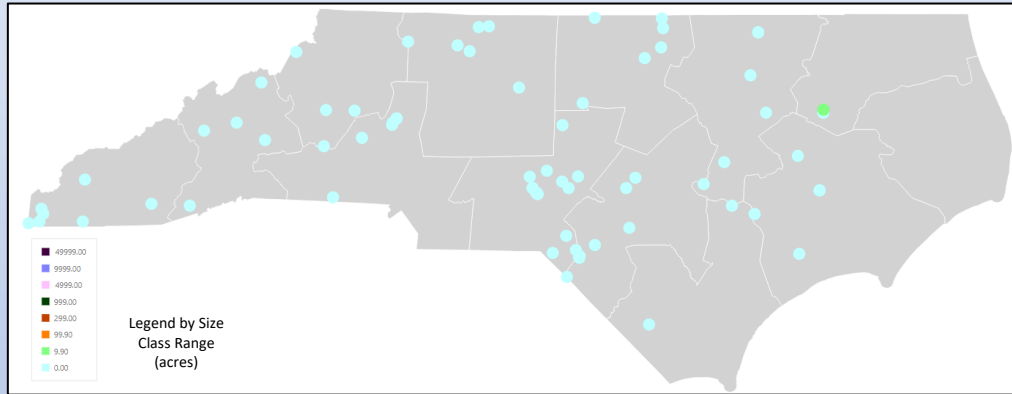
*Created by: Jamie Dunbar  
Fire Environment Staff Forester  
NC Forest Service*

# Incident Activity

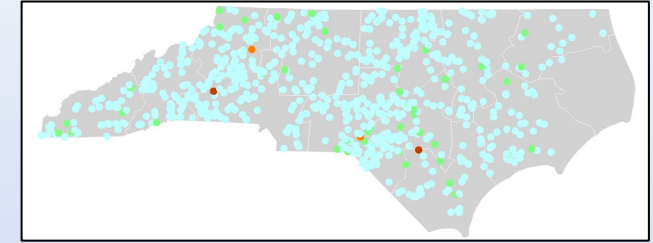
fiResponse Incident Location Map (for general context, preliminary data)

**7-Day Activity: 3/22 – 3/28, 2024**

Report: Business Intelligence Module, Response Trends Map



MTD: 3/1 – 3/28



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

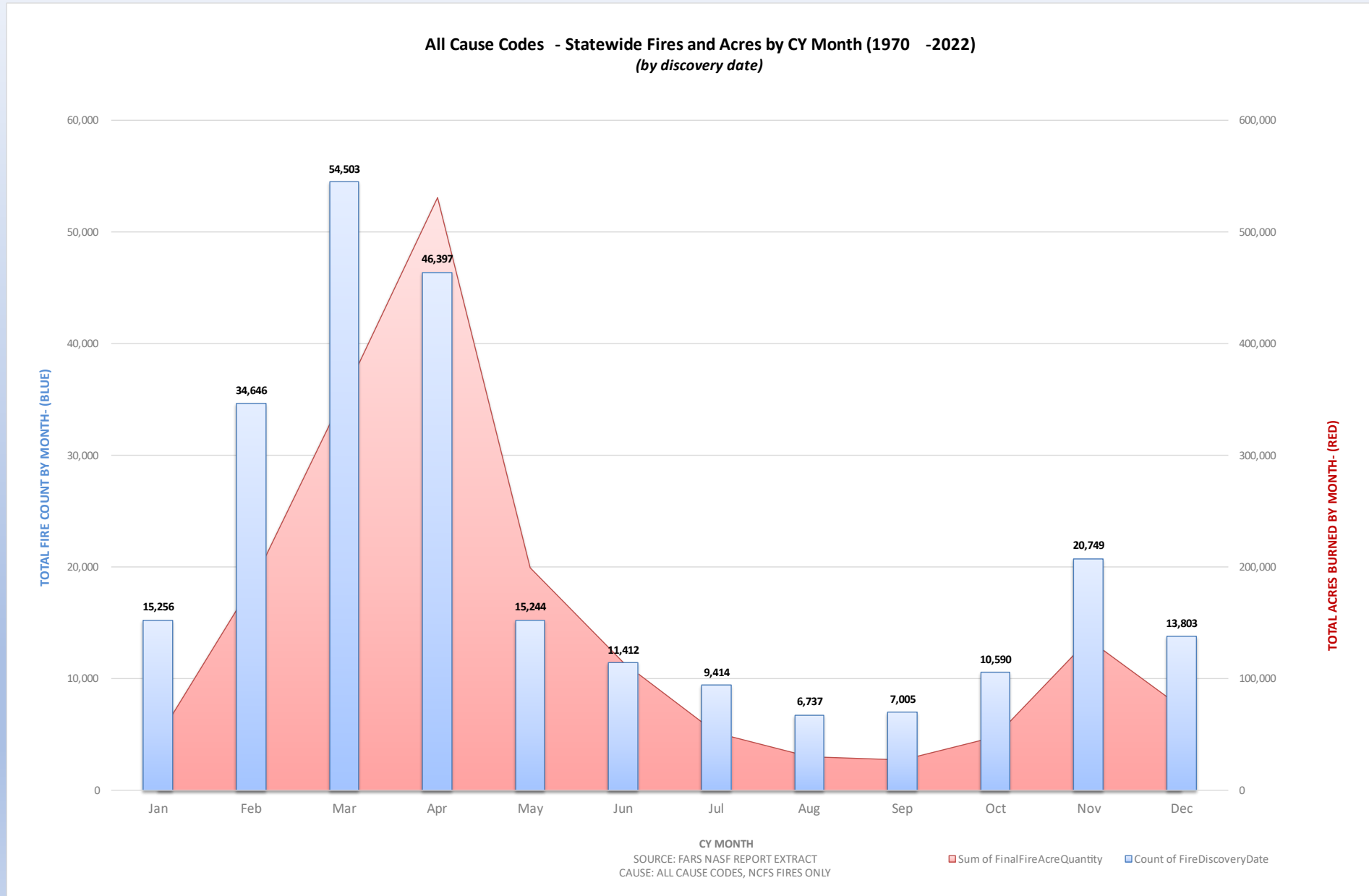
**Largest incidents Last 7 Days (Ending 3/28):**  
 \*from fiResponse & preliminary reporting only\*

Discovery Date	Region	District	County	Acres
3/24/2024	Region 1	District 7	Martin County	15.00
3/25/2024	Region 2	District 6	Robeson County	6.00
3/22/2024	Region 3	District 9	Swain County	5.00
3/22/2024	Region 3	District 9	Clay County	3.00
3/22/2024	Region 2	District 10	Randolph County	3.00
3/27/2024	Region 2	District 6	Robeson County	3.00
3/22/2024	Region 3	District 9	Swain County	2.00
3/25/2024	Region 3	District 9	Clay County	2.00
3/25/2024	Region 2	District 6	Harnett County	2.00
3/25/2024	Region 2	District 3	Moore County	2.00

NCFS – By Region				
7-Day 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:	3/22 – 3/28, 2024			
Area	Wildfire Count	Wildfire Acres	RX Count (State & Private)	RX Acres (State & Private)
R1	11	16.3	1	49
R2	53	36.5	36	2,683
R3	29	25.8	2	218

"209 Criteria" Fires for March - 2024 (ending 3/28/24)				
Incident Number	Incident Name	County	Discovery Date	Approx. Size (ac)
NC-NCS-240010	Usher Clearing	Robeson	3/14/2024	1.5
NC-NCS-240011	Drop Zone	Scotland	3/19/2024	110
NC-NCS-240012	Huckleberry Mountain	Rutherford	3/19/2024	462
NC-NCS-240013	Brushy Mountain	Wilkes	3/19/2024	125
NC-NCS-240014	Horseshoe Lake	Bladen	3/20/2024	550
NC-NCS-240015	Brook View	Wilkes	3/20/2024	3
NC-NCS-240016	Morton Rd	Onslow	3/21/2024	110

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



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

# Regional Comments for this Week – R1

## Regional Comments:

- N/A

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From Today's SACC [Daily Outlook](#) Discussion for the Southern Area (SA)

- Today - Fire potential will increase across the Plains states today as very dry, warm and windy conditions overspread the region. The Appalachians will also see windy and locally very dry conditions, but fuel dryness is limited compared to last week's outbreak. The rest of the Southeast may see an uptick in initial attack due to a warm and dry afternoon, but conditions will also be favorable for Rx given recent rainfall.
- Tomorrow - Another day of gusty winds is likely for the Appalachians, but clouds and RH will begin to increase for western areas; look for W/SW winds gusting as high as 35-45 mph in western VA, eastern KY and adjacent areas; scattered thunderstorms are possible for KY and VA later in the day, but coverage of wetting rain is uncertain.
- Sunday - Some dry air could linger in the Appalachians, but most areas will see good recovery in the morning, while some showers and storms may wet fuels in parts of the region; winds may gust from 20-30 mph at times.
- 10-hour fuels: Dry air will bring 10FM down some the next few days in the Southeast, with an increasing trend in most areas by Sunday and Monday, lingering into mid-week as a front approaches; drying will resume late next week.
- 100-hr fuels: Humid weather will return to the Mississippi Valley and Southeast Sunday, Monday and Tuesday, with drying thereafter – areas that do not see wetting rain may see anomalously dry 100FM by the end of next week as another very dry air mass returns, along with gusty winds.



## Regional Comments for this Week – R2

### Regional Comments:

- Most of the Region received between 1-2” of rain over the last 3 days. NE corner of Surry, Yadkin, Stokes Received the least amount of rain.
  - Rain brought much needed relief forest fuels. 100-hour fuels are now running at seasonal average values.
  - Warm and breezy weekend could quickly dry out surface fuels and elevate fire danger especially in NE Corner (Blue Ridge Escarpment Counties)
  - Green up is progressing in the Piedmont. Hardwood areas are ranging from 15-25% of leaf out depending on locations.
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### From Today’s SACC [Daily Outlook](#) Discussion for the Southern Area (SA)

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## Regional Comments:

- Low fire activity this week with precipitation events over the weekend and on Tuesday this past week.
  - Tuesday's rain brought between 0.5-.75" to most locations, lesser amounts were observed in the greater Asheville basin for approximately .3"
  - Unseasonably warm, dry, and breezy conditions expected today and into the weekend should quickly dry out fuels and result in an uptick of initial attack activity.
  - Fuel conditions should moderate towards the later part of the weekend and into Monday ahead of the next approaching system, that could bring additional precipitation to the region into midweek.
  - Somewhat early green up conditions continue at lower elevations and along the escarpment. Tree species greening up include mostly yellow-poplar and various maple species.
- 

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# 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>

## 3/28/24 Observations

Averages by FDRA																		
FDRA	STATION_COUNT	NFDR_DATE	BI	ERC	IC	SC	KBDI	1HR	10HR	100HR	1000HR	HRB	WOODY	TEMP	RH	WIND	PRECIP	DUR
<b>Southern Highlands</b>	2	2024-03-28	109.75 89.5%	39.55 86.0%	16.00 96.9%	64.15 93.9%	14.00	11.72 31.5%	16.10 31.1%	21.03 69.9%	23.93 93.9%	75.00	79.00	55.0°F	25.5%	NNW 10.0 mph	0.00 in.	0.0
<b>Central Mountains</b>	3	2024-03-28	62.90 72.3%	27.17 72.6%	7.33 81.4%	28.40 71.0%	18.00	11.40 24.4%	16.62 42.0%	20.07 62.9%	22.93 92.5%	116.67	111.33	56.7°F	30.3%	ESE 6.0 mph	0.00 in.	0.0
<b>Northern Highlands</b>	2	2024-03-28	61.15 71.1%	20.05 63.5%	6.90 82.2%	37.60 75.8%	9.50	11.90 28.5%	20.18 73.3%	20.62 73.3%	23.17 91.2%	118.20	121.00	51.0°F	27.5%	W 12.0 mph	0.00 in.	0.0
<b>Blue Ridge Escarpment</b>	3	2024-03-28	83.97 75.0%	33.40 72.2%	13.87 89.8%	44.50 78.6%	10.33	9.96 24.9%	17.31 46.9%	20.15 58.2%	18.41 20.3%	115.37	110.67	59.3°F	23.7%	N 10.0 mph	0.00 in.	0.3
<b>Western Piedmont</b>	3	2024-03-28	17.37 15.9%	7.40 14.9%	1.80 25.0%	6.53 34.2%	3.00	18.70 82.2%	28.05 93.6%	20.23 72.4%	22.18 87.4%	140.10	125.33	61.7°F	50.3%	N 6.0 mph	0.59 in.	8.0
<b>Sandhills</b>	3	2024-03-28	4.00 8.5%	2.83 7.1%	0.13 11.7%	1.10 9.8%	3.33	23.71 89.3%	31.95 98.0%	20.56 78.1%	21.57 86.8%	242.80	195.67	55.0°F	79.0%	NNE 7.0 mph	1.61 in.	12.3
<b>Eastern Piedmont</b>	4	2024-03-28	0.00 5.1%	0.00 5.7%	0.00 10.9%	0.48 4.9%	1.50	29.34 94.6%	32.34 98.5%	20.58 78.5%	21.94 89.0%	185.65	158.75	52.8°F	85.8%	NNE 7.8 mph	1.12 in.	15.0
<b>Southern Coastal</b>	7	2024-03-28	0.00 3.2%	0.00 4.1%	0.00 9.3%	0.00 3.1%	24.43	33.36 98.6%	32.71 99.3%	21.03 71.9%	23.10 88.7%	50.00	90.00	53.3°F	96.0%	NNE 6.4 mph	1.21 in.	11.3
<b>Northern Coastal</b>	4	2024-03-28	0.00 6.3%	0.00 6.8%	0.00 12.2%	0.00 5.9%	3.00	35.00 100.0%	31.98 98.1%	21.06 75.2%	23.23 91.6%	152.50	115.50	51.0°F	96.8%	SSE 10.3 mph	1.84 in.	11.0

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



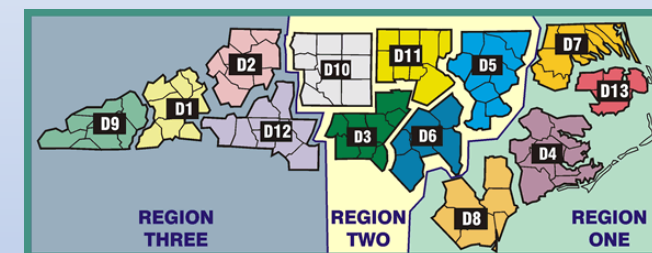
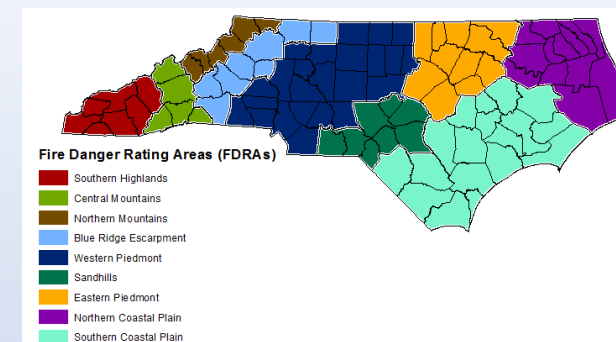
# Important notes for next slide group:

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

- These are extracts from FF+ using weekly 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:

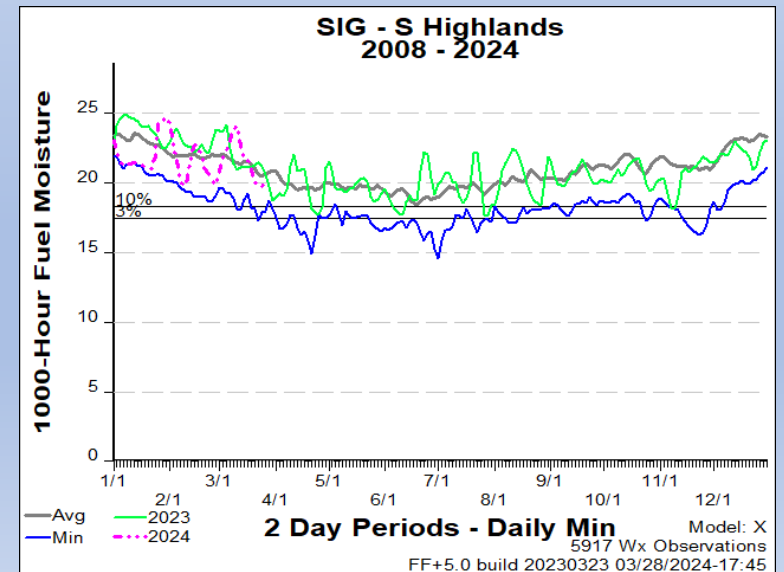
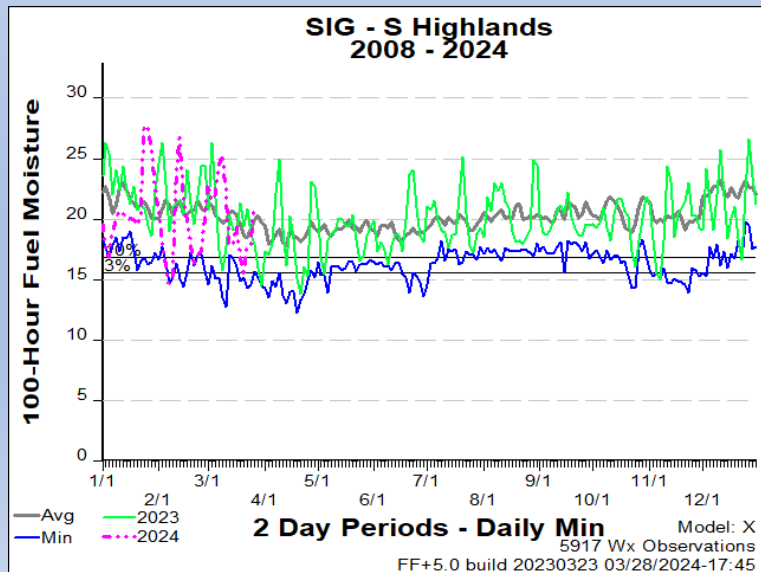
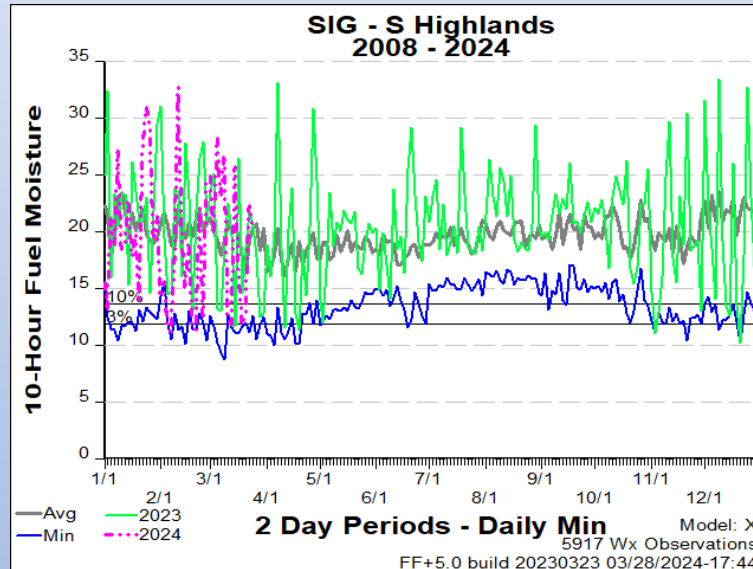
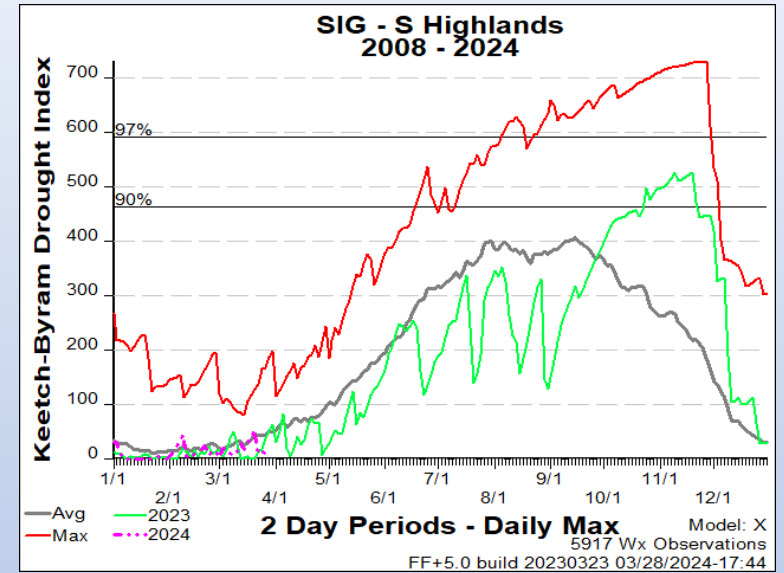
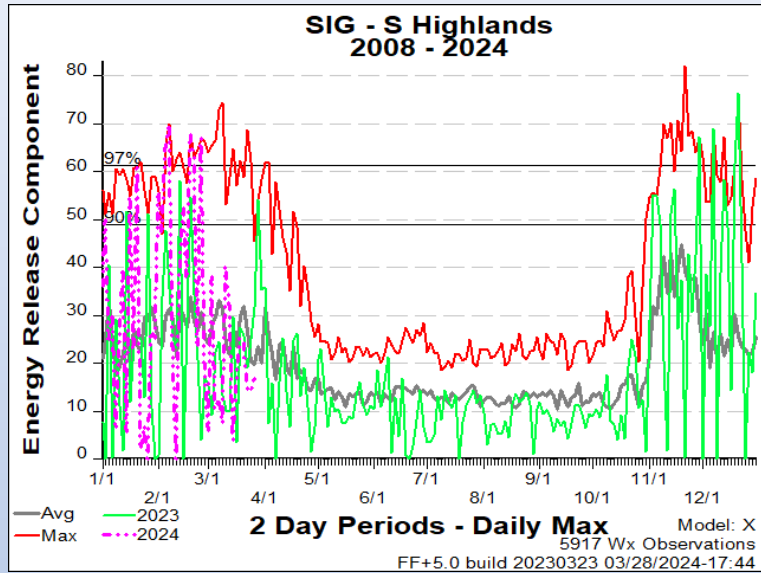
- Read the key and notes for each FDRA, included on the outlook matrix page.
- Forecasts are variable and can change significantly over a forecast cycle and across the landscape.
- This is another tool for gaining better situational awareness, and should be used for general planning purposes only.
- 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 9-26 are organized by FDRA in this order:

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

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

# FDRA – Southern Highlands



## Weekly Outlook

### Southern Highlands FDRA - General Fire Danger Forecast

**For planning purposes only; forecast is subject to change**

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

DAY	FRI 29-Mar	SAT 30-Mar	SUN 31-Mar	MON 01-Apr	TUE 02-Apr	WED 03-Apr	THU 04-Apr
Avg. Max. Temp. (°F)	64	68	73	73	69	55	56
Avg. Min. Humidity (%)	22	28	45	54	59	37	36
Avg. 20' Wind Speed (mph)	7	8	8	8	12	15	12
Avg. Wind Direction*	W	WSW	W	SW	SW	WNW	NW
Avg. Probability of Precip. (%)	1	1	2	29	58	24	10
Days Since a Wetting Rain**	7.7	8.7	9.7				
Forecast ERC (Fuel Model X)	52.5	57.3	40.9	28.2	21.1	23.7	34.0
Forecast BI (Fuel Model X)	128.6	157.8	114.4	91.1	79.6	98.7	108.5
Forecast IC (Fuel Model X)	14.8	21.0	11.8	8.7	7.4	9.1	10.8
Forecast 100-Hr. FMC	19.7	18.4	17.5	17.3	17.5	18.1	18.2
Forecast 1000-Hr. FMC	23.8	23.7	23.6	23.4	23.1	22.9	22.7
KBDI	14.0						

#### Data Source:

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

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

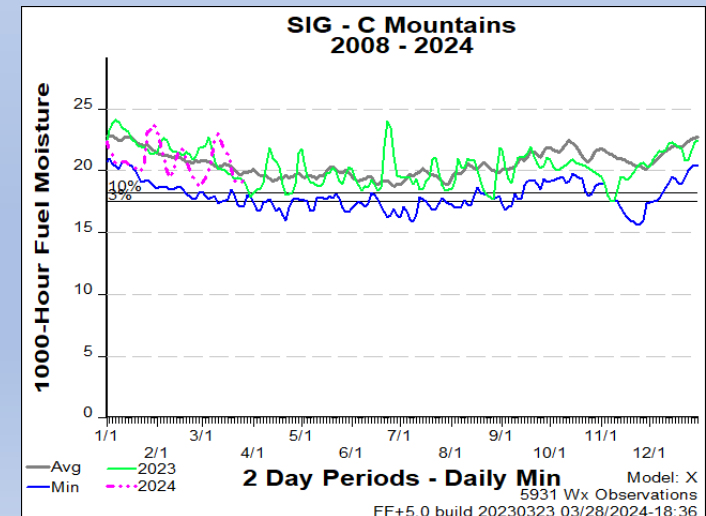
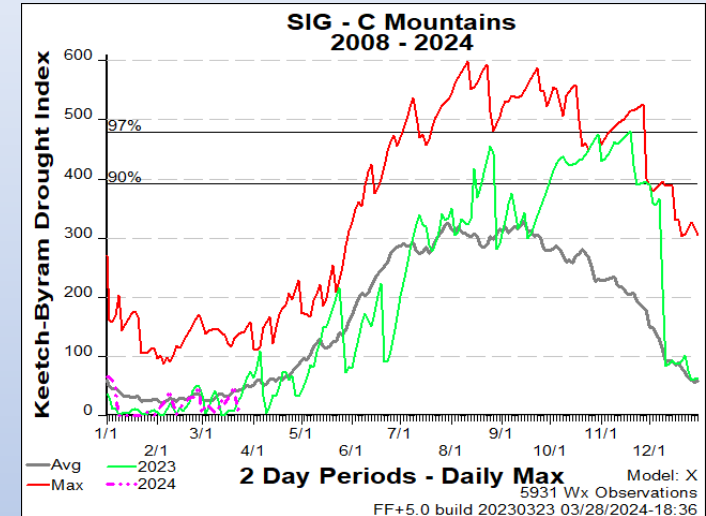
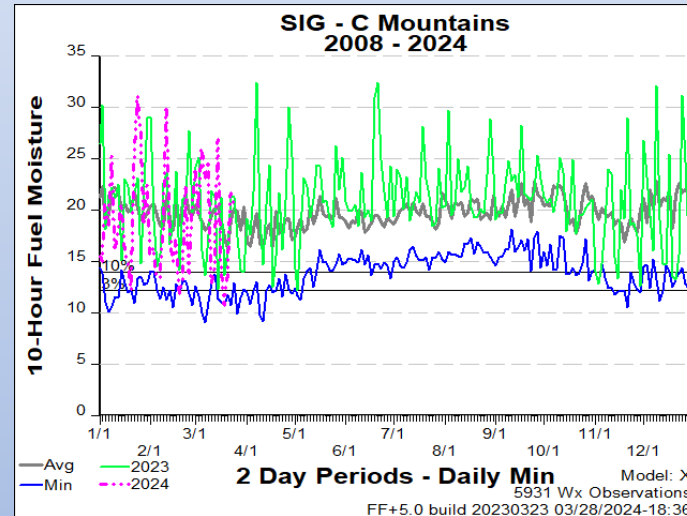
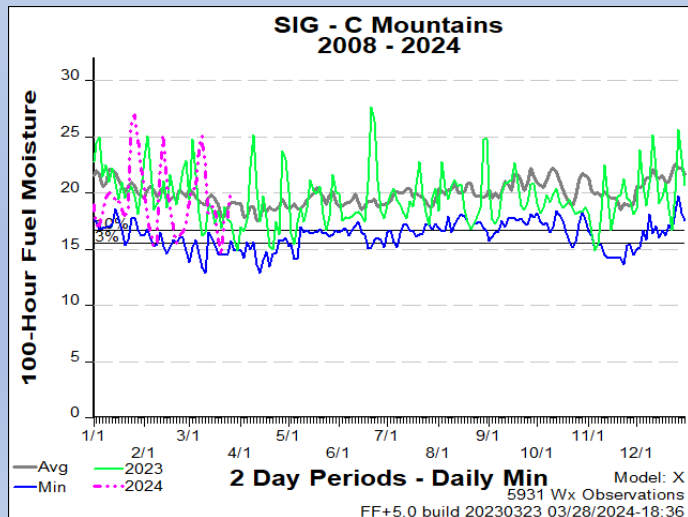
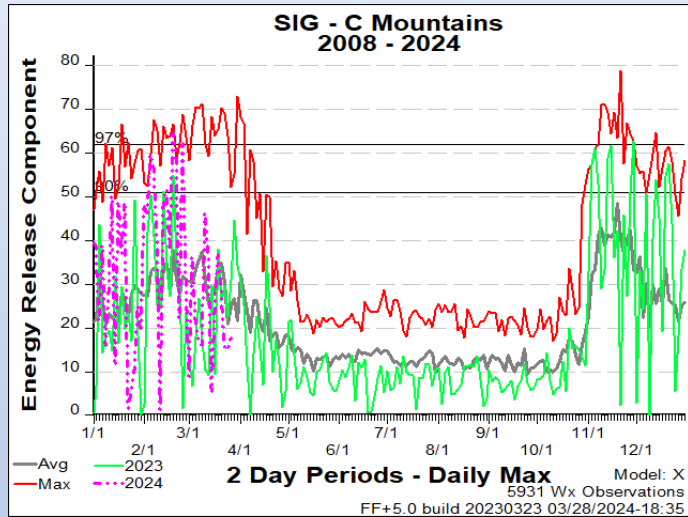
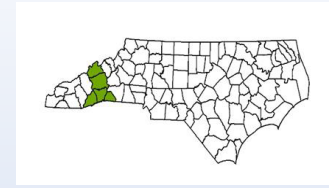
- Tusquitee (315602)
- Locust Gap (315802)
- Highlands (315803)

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

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



# FDRA – Central Mountains



## Weekly Outlook

### Central Mountains FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

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

DAY	FRI 29-Mar	SAT 30-Mar	SUN 31-Mar	MON 01-Apr	TUE 02-Apr	WED 03-Apr	THU 04-Apr
Avg. Max. Temp. (°F)	66	73	78	79	76	57	56
Avg. Min. Humidity (%)	21	24	34	41	46	39	32
Avg. 20' Wind Speed (mph)	9	7	8	7	10	13	15
Avg. Wind Direction*	WNW	WSW	W	WSW	SW	WNW	NW
Avg. Probability of Precip. (%)	1	4	5	29	58	31	9
Days Since a Wetting Rain**	3.0	4.0	5.0				
Forecast ERC (Fuel Model X)	40.1	43.5	32.1	21.9	17.2	17.0	22.7
Forecast BI (Fuel Model X)	117.6	116.0	80.4	55.1	52.9	50.2	61.7
Forecast IC (Fuel Model X)	14.7	16.4	10.9	7.0	6.9	5.7	7.4
Forecast 100-Hr. FMC	18.4	17.1	16.5	16.2	16.8	17.2	17.2
Forecast 1000-Hr. FMC	22.8	22.7	22.6	22.3	22.0	21.8	21.7
KBDI	18.0						

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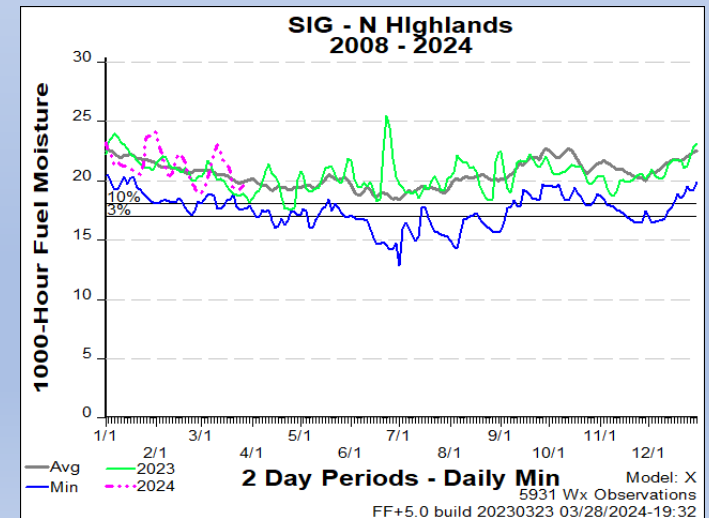
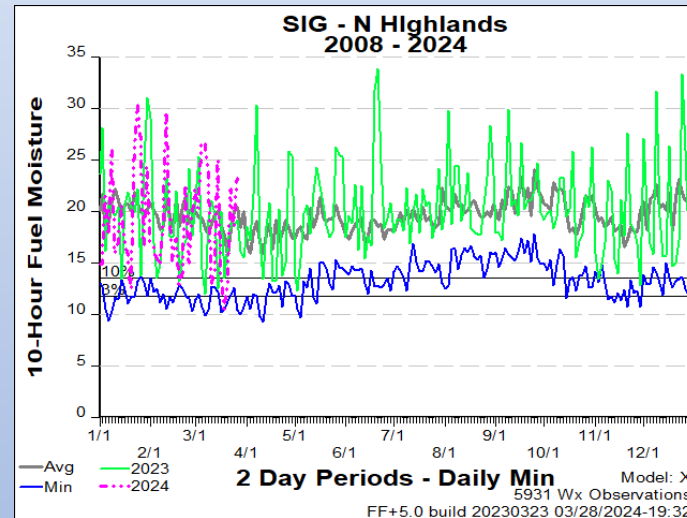
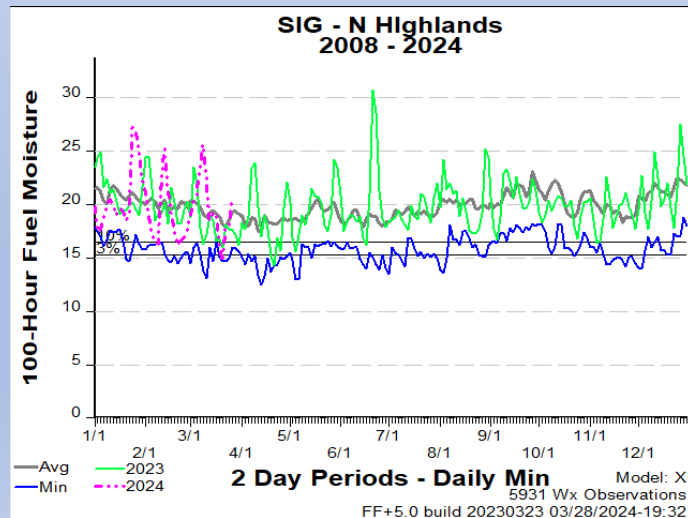
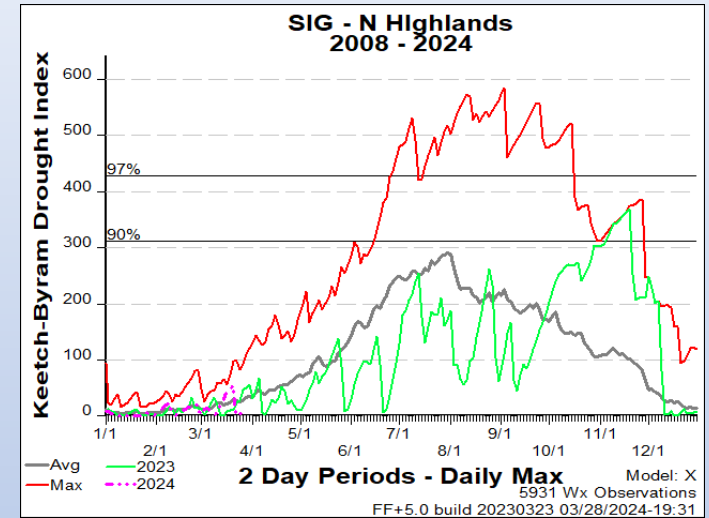
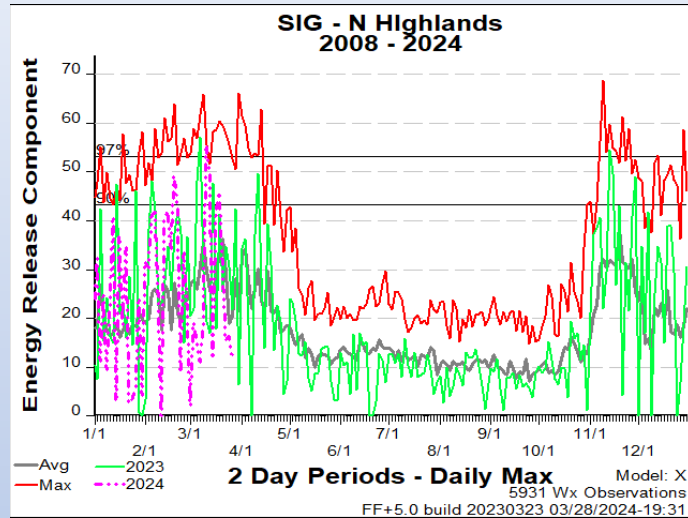
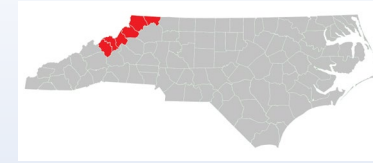
- 7 Mile Ridge (313302)
- Davidson River (316001)
- Mtn Horticultural Crops Res Stn (316141)

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

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



# FDRA – Northern Highlands



## Weekly Outlook

### Northern Highlands FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

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

DAY	FRI 29-Mar	SAT 30-Mar	SUN 31-Mar	MON 01-Apr	TUE 02-Apr	WED 03-Apr	THU 04-Apr
Avg. Max. Temp. (°F)	58	66	71	72	71	51	49
Avg. Min. Humidity (%)	29	28	40	47	51	45	34
Avg. 20' Wind Speed (mph)	16	13	13	10	12	17	21
Avg. Wind Direction*	WNW	W	W	WSW	WSW	W	WNW
Avg. Probability of Precip. (%)	0	11	13	33	64	39	10
Days Since a Wetting Rain**	2.0	3.0	4.0				
Forecast ERC (Fuel Model X)	34.9	38.9	26.7	19.2	16.8	19.1	22.1
Forecast BI (Fuel Model X)	119.4	105.4	69.3	44.8	45.5	57.7	61.7
Forecast IC (Fuel Model X)	16.5	16.0	9.9	5.9	5.6	6.3	7.7
Forecast 100-Hr. FMC	19.9	18.5	17.2	16.9	16.9	17.2	16.6
Forecast 1000-Hr. FMC	23.0	23.0	22.9	22.7	22.5	22.2	22.5
KBDI	11.0						

#### Data Source:

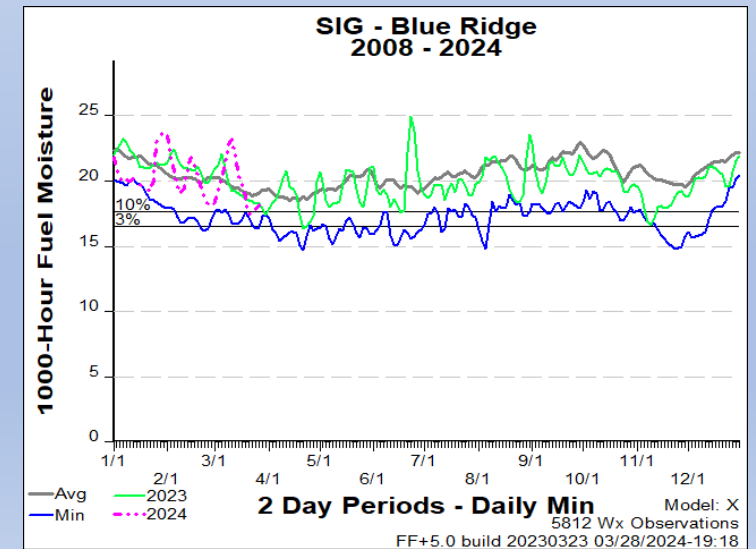
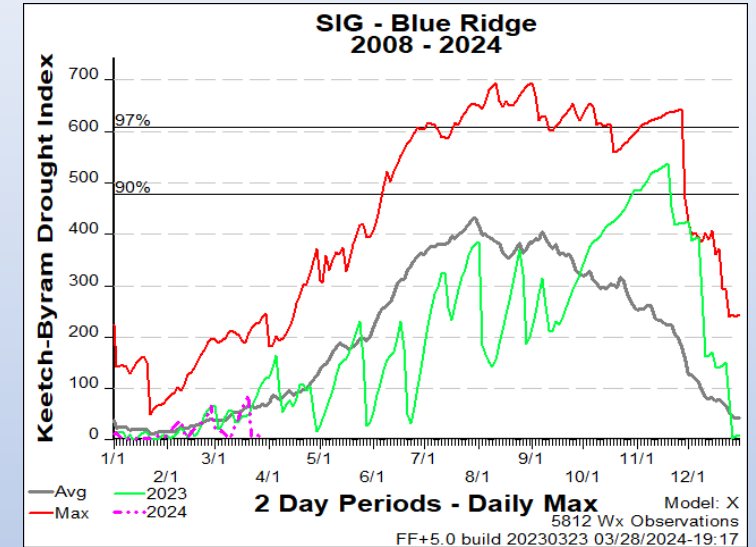
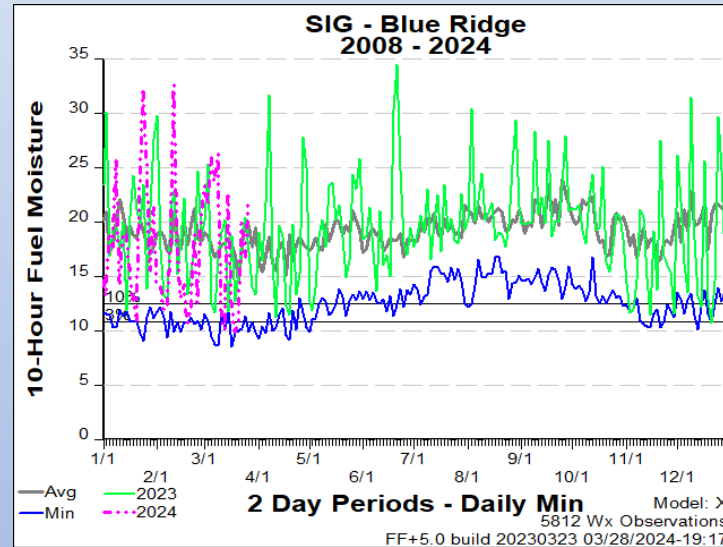
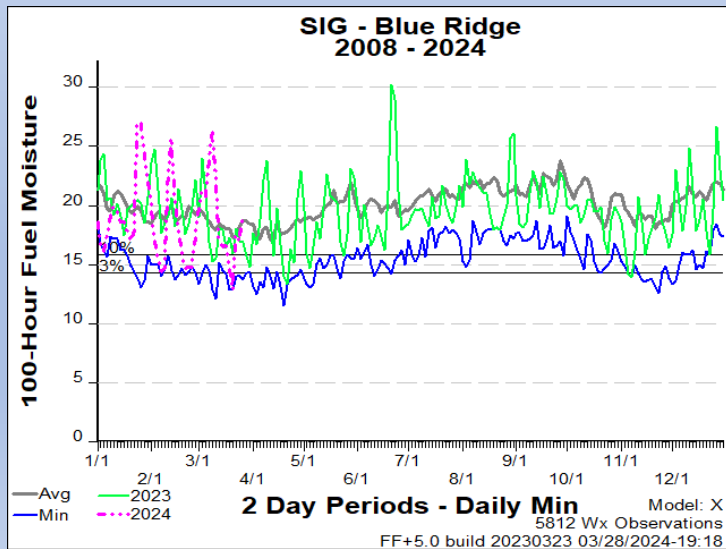
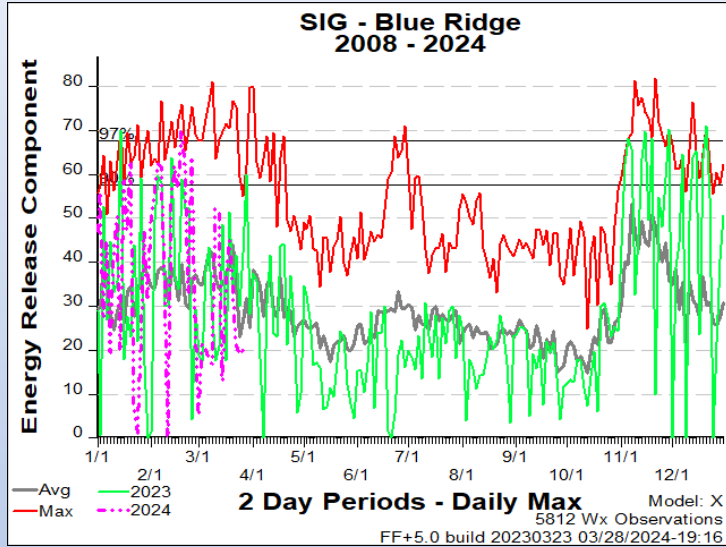
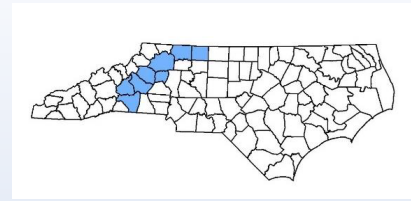
- Weather forecasts come from the National Weather Service's [Digital Forecast Database](#). The wind speed and direction, and probability of precipitation, are calculated as averages of the 1 am, 7 am, 1 pm, and 7 pm forecasts. The 20-foot wind speed is estimated from the 10-meter forecast using the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

# FDRA – Blue Ridge Escarpment



## Weekly Outlook

### Blue Ridge Escarpment FDRA - General Fire Danger Forecast

**For planning purposes only; forecast is subject to change**

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

DAY	FRI 29-Mar	SAT 30-Mar	SUN 31-Mar	MON 01-Apr	TUE 02-Apr	WED 03-Apr	THU 04-Apr
Avg. Max. Temp. (°F)	66	72	77	77	76	59	56
Avg. Min. Humidity (%)	24	25	39	45	49	37	31
Avg. 20' Wind Speed (mph)	11	8	9	8	10	15	15
Avg. Wind Direction*	WNW	WSW	WSW	WSW	SW	W	WNW
Avg. Probability of Precip. (%)	1	6	8	23	58	34	8
Days Since a Wetting Rain**	3.7	4.7	5.7				
Forecast ERC (Fuel Model X)	41.7	45.6	37.8	30.7	26.7	29.4	37.9
Forecast BI (Fuel Model X)	116.1	112.3	90.1	69.4	73.6	85.1	101.4
Forecast IC (Fuel Model X)	16.9	18.1	13.4	8.5	8.5	10.4	13.1
Forecast 100-Hr. FMC	17.7	16.0	14.9	14.9	16.3	16.3	16.0
Forecast 1000-Hr. FMC	18.7	18.5	17.9	17.4	17.5	17.3	17.3
KBDI	12.0						

#### Data Source:

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

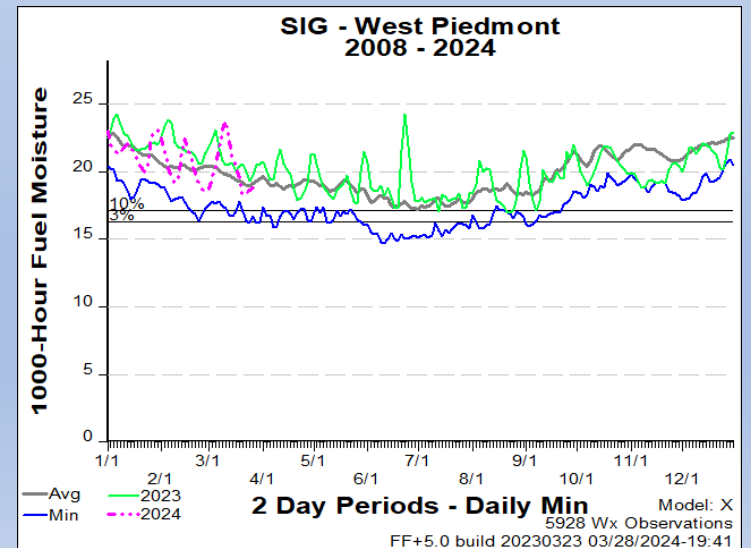
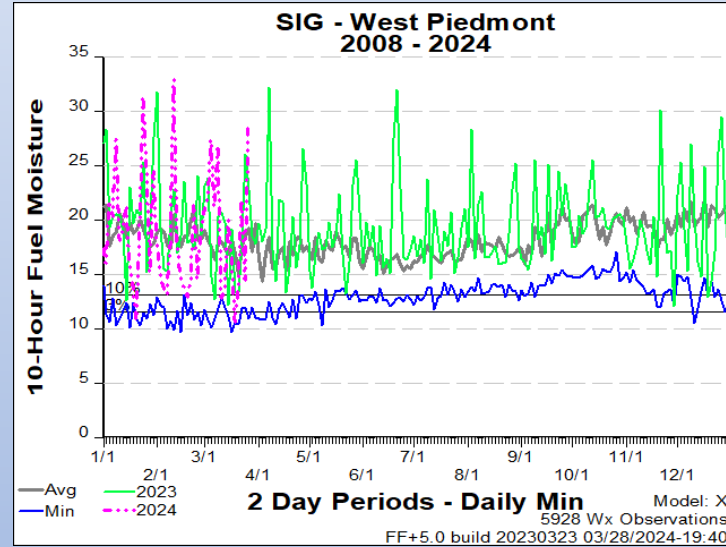
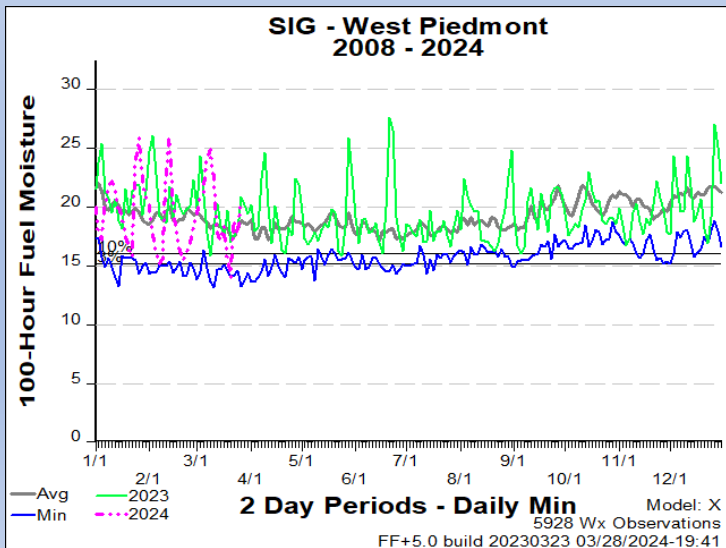
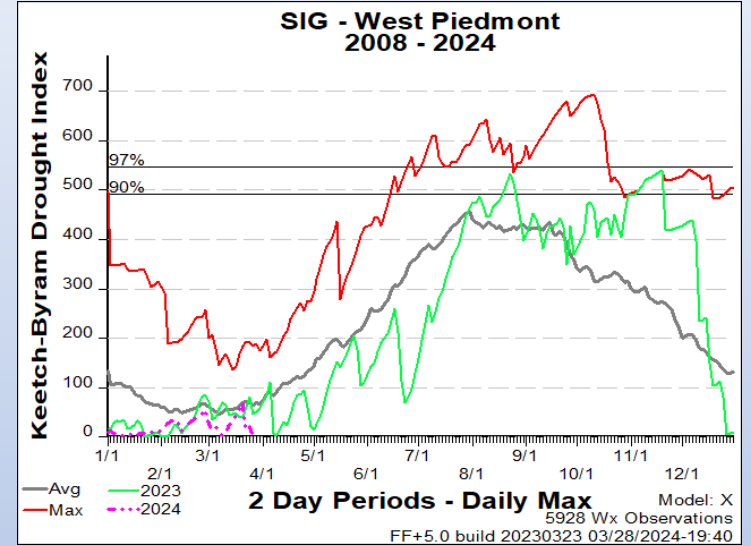
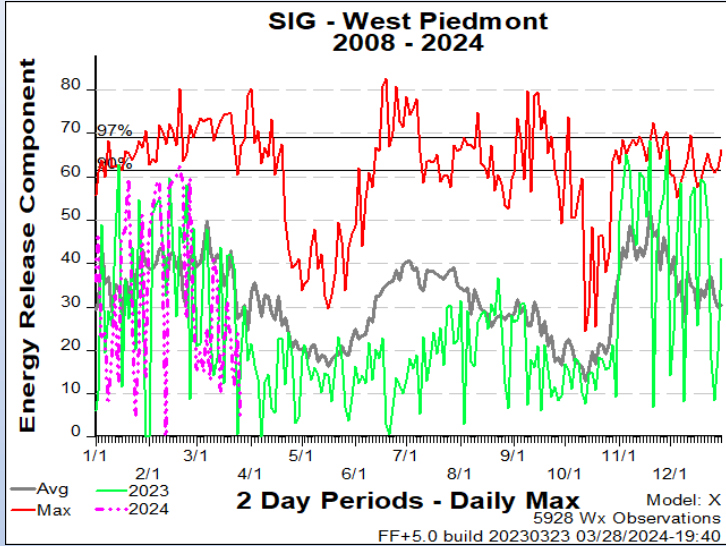
Values in the table above are averages from 3 stations in this FDRA:

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

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

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

# FDRA – Western Piedmont



## Weekly Outlook

### Western Piedmont FDRA - General Fire Danger Forecast

For planning purposes only; forecast is subject to change

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

DAY	FRI 29-Mar	SAT 30-Mar	SUN 31-Mar	MON 01-Apr	TUE 02-Apr	WED 03-Apr	THU 04-Apr
Avg. Max. Temp. (°F)	70	75	80	82	81	67	62
Avg. Min. Humidity (%)	25	30	39	43	48	35	28
Avg. 20' Wind Speed (mph)	9	8	7	8	12	13	12
Avg. Wind Direction*	W	WSW	SW	SW	SW	WSW	WNW
Avg. Probability of Precip. (%)	1	0	6	15	57	35	6
Days Since a Wetting Rain**	2.7	3.7	4.7				
Forecast ERC (Fuel Model X)	26.8	29.1	33.0	19.3	14.8	16.6	21.9
Forecast BI (Fuel Model X)	73.6	78.1	83.7	41.7	40.9	43.1	46.6
Forecast IC (Fuel Model X)	10.6	11.6	13.2	6.3	6.0	6.2	7.4
Forecast 100-Hr. FMC	20.6	19.5	18.1	17.8	18.4	19.0	18.8
Forecast 1000-Hr. FMC	22.1	22.0	21.9	21.8	21.6	21.5	21.4
KBDI	3.0						

#### Data Source:

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

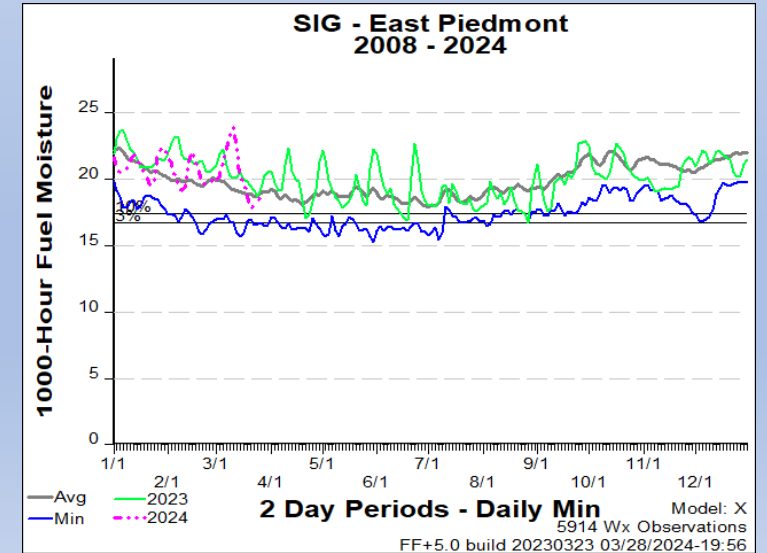
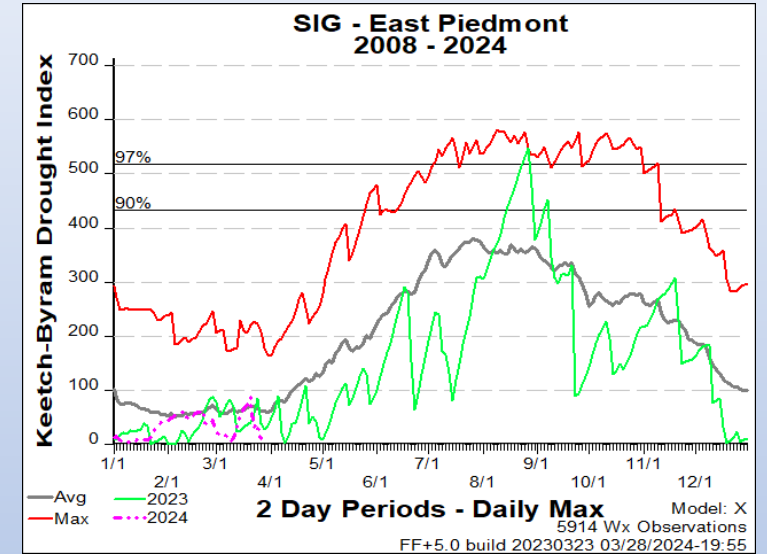
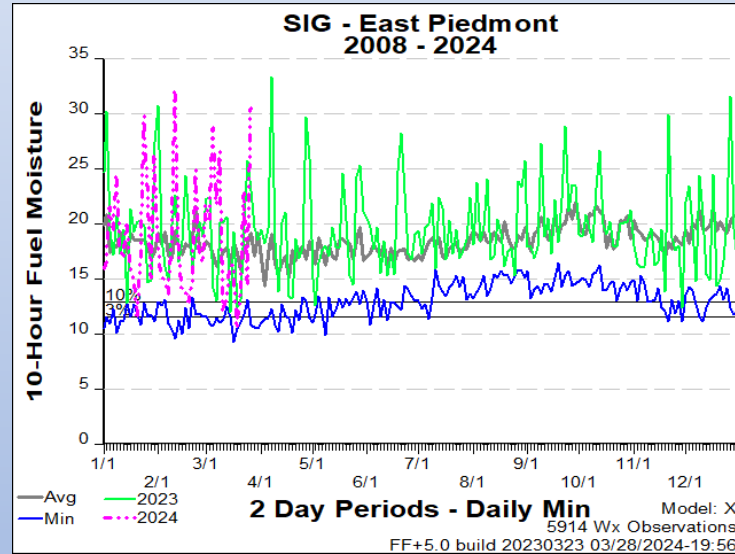
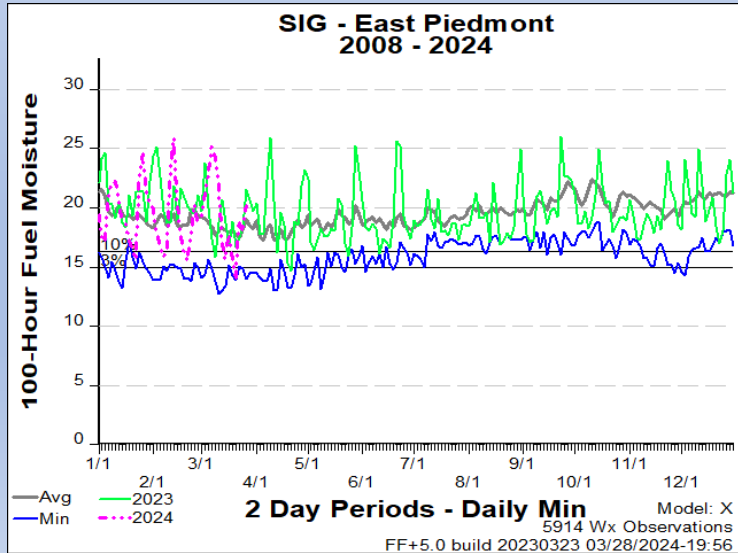
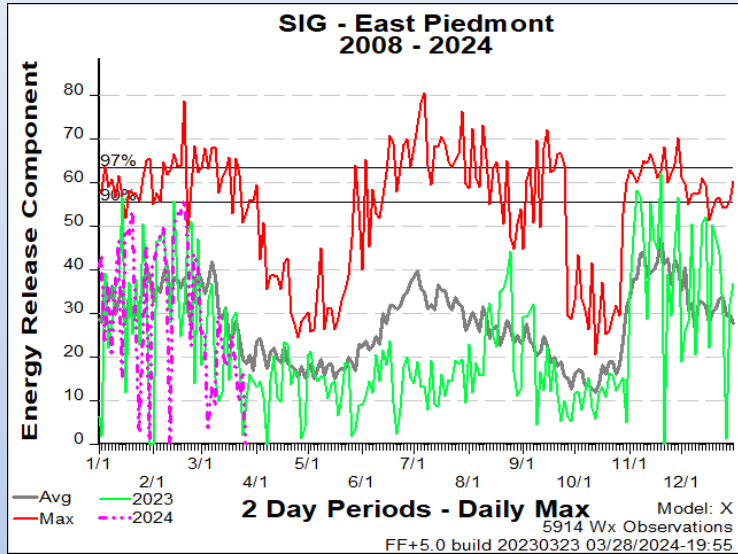
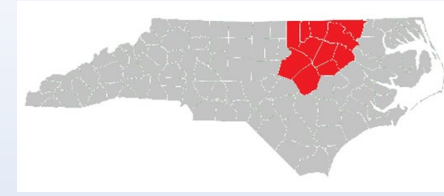
Values in the table above are averages from 3 stations in this FDRA:

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

KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 40°F	Between 40°F and 50°F	Greater than 50°F
Avg. Min. Humidity	Greater than 35%	Between 30% and 35%	Less than 30%
Avg. 20' Wind Speed	Less than 2 mph	Between 2 mph and 4 mph	Greater than 4 mph
Avg. Wind Direction*	Criticality of wind direction is highly dependent on burn operations and/or structures threatened.		
Days Since a Wetting Rain**	A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted above.		
Energy Release Comp.	Less than 40	Between 40 and 52	Greater than 52
Burning Index	Less than 95	Between 95 and 120	Greater than 120
Ignition Component	Less than 9	Between 9 and 14	Greater than 14
100-Hour Fuel Moisture	Greater than 18%	Between 17% and 18%	Less than 17%
1000-Hour Fuel Moisture	Greater than 19%	Between 18% and 19%	Less than 18%
KBDI	Less than 344	Between 344 and 479	Greater than 479
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 29-Mar	SAT 30-Mar	SUN 31-Mar	MON 01-Apr	TUE 02-Apr	WED 03-Apr	THU 04-Apr
Avg. Max. Temp. (°F)	68	74	81	82	82	69	62
Avg. Min. Humidity (%)	32	34	42	46	51	42	30
Avg. 20' Wind Speed (mph)	10	9	8	8	12	13	12
Avg. Wind Direction*	WNW	WSW	WSW	SW	SW	WSW	WNW
Avg. Probability of Precip. (%)	1	0	9	18	56	43	5
Days Since a Wetting Rain**	1.0	2.0	3.0				
Forecast ERC (Fuel Model X)	13.6	18.5	19.5	12.1	10.1	13.3	19.3
Forecast BI (Fuel Model X)	37.1	40.5	41.9	25.9	31.4	35.7	45.0
Forecast IC (Fuel Model X)	4.1	6.1	7.1	3.2	3.5	4.5	6.6
Forecast 100-Hr. FMC	21.7	21.2	19.5	19.2	20.2	20.8	20.4
Forecast 1000-Hr. FMC	21.9	21.8	21.8	21.7	21.8	21.7	21.7
KBDI	1.5						

#### Data Source:

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

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

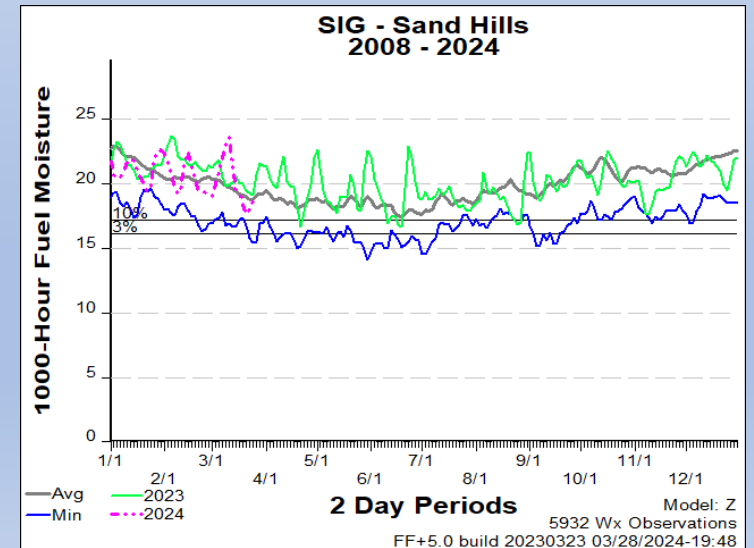
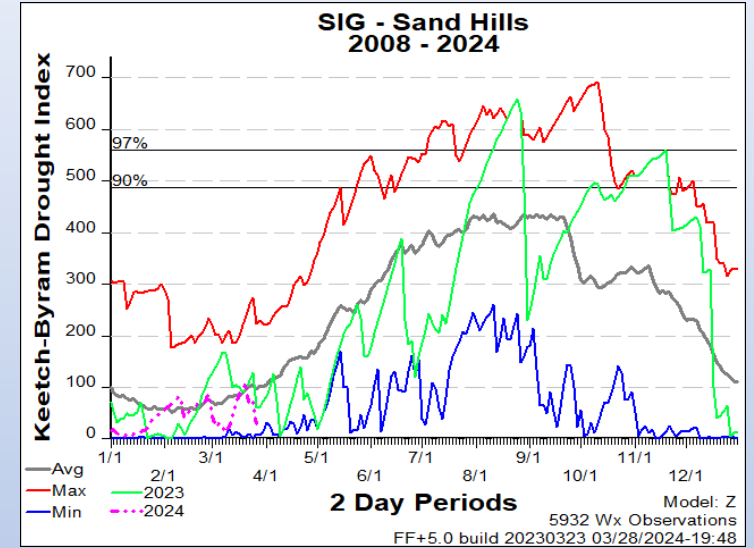
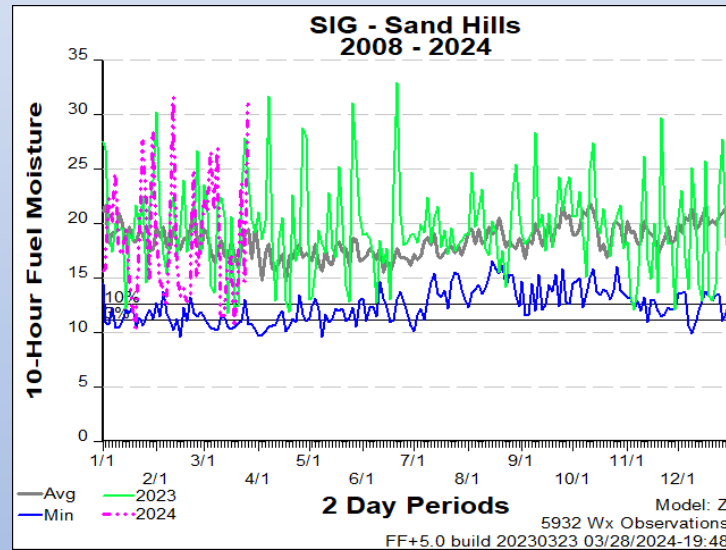
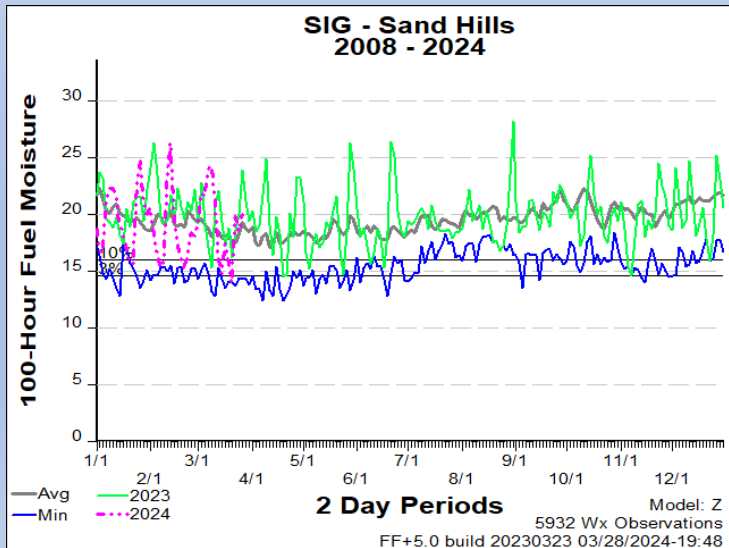
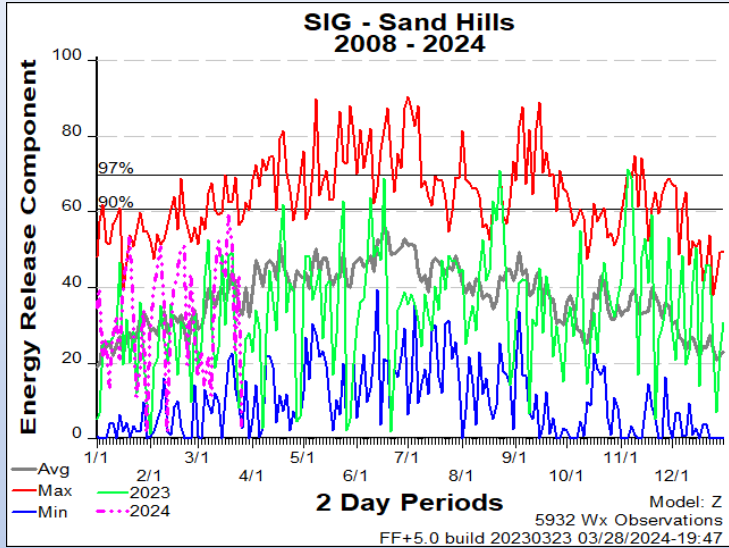
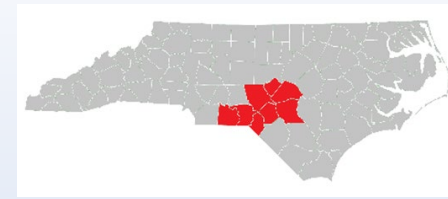
- Oxford Tobacco Research Stn (310841)
- Upper Coastal Plain Res Stn (312940)
- Lake Wheeler Rd Field Lab (314941)
- Central Crops Research Station (317441)

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 29-Mar	SAT 30-Mar	SUN 31-Mar	MON 01-Apr	TUE 02-Apr	WED 03-Apr	THU 04-Apr
Avg. Max. Temp. (°F)	71	76	82	84	83	71	65
Avg. Min. Humidity (%)	26	29	36	40	45	34	25
Avg. 20' Wind Speed (mph)	8	8	8	9	12	13	11
Avg. Wind Direction*	W	WSW	WSW	SW	SW	WSW	WNW
Avg. Probability of Precip. (%)	1	0	2	9	55	37	6
Days Since a Wetting Rain**	1.7	2.7	3.7				
Forecast ERC (Fuel Model Z)	30.8	36.3	41.1	30.6	30.2	29.6	40.4
Forecast BI (Fuel Model Z)	43.4	49.6	47.1	35.9	47.6	46.7	52.4
Forecast IC (Fuel Model Z)	10.0	14.7	15.5	9.5	13.0	10.7	14.2
Forecast 100-Hr. FMC	21.4	20.6	18.8	18.4	19.1	19.5	19.4
Forecast 1000-Hr. FMC	21.5	21.5	21.5	21.5	21.4	21.3	21.2
KBDI	3.3						

#### Data Source:

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

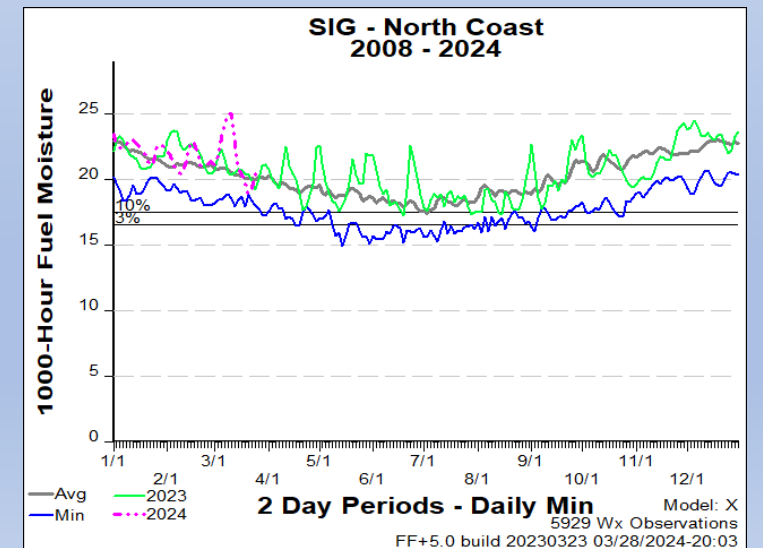
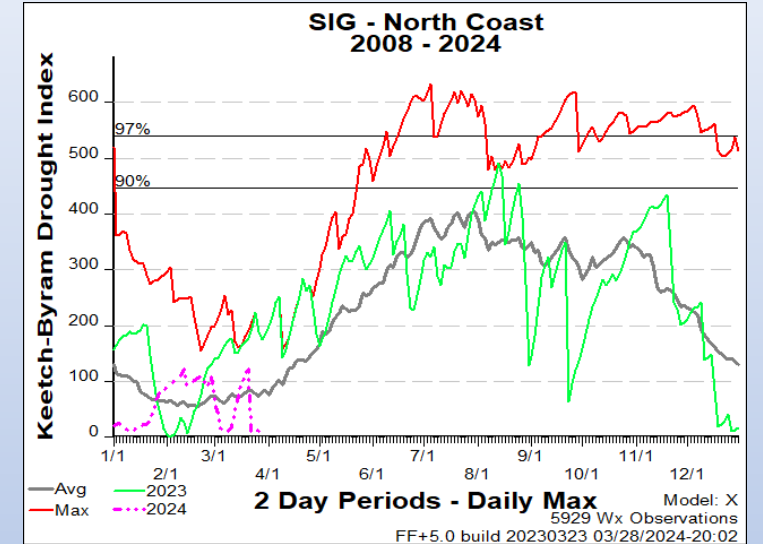
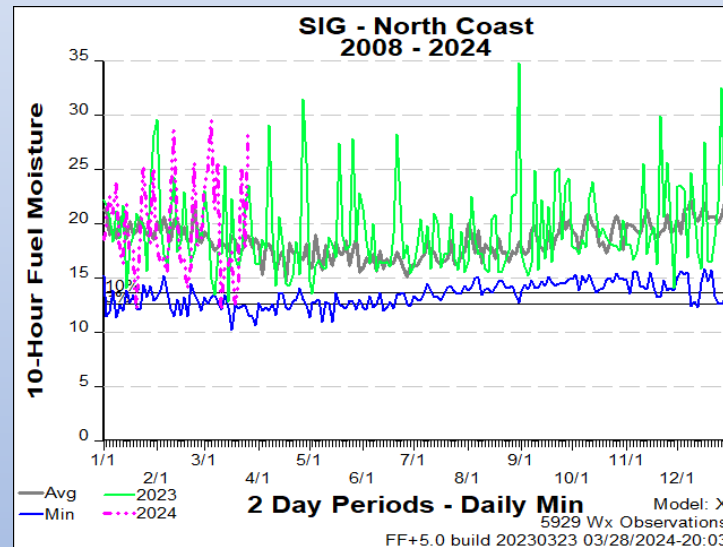
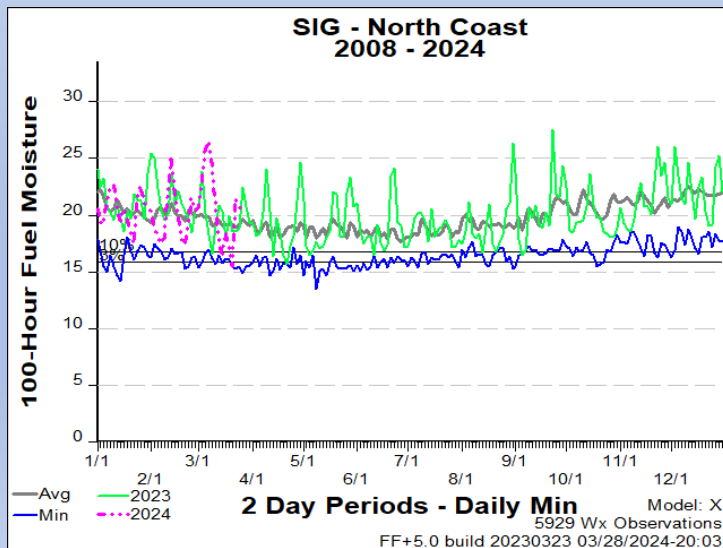
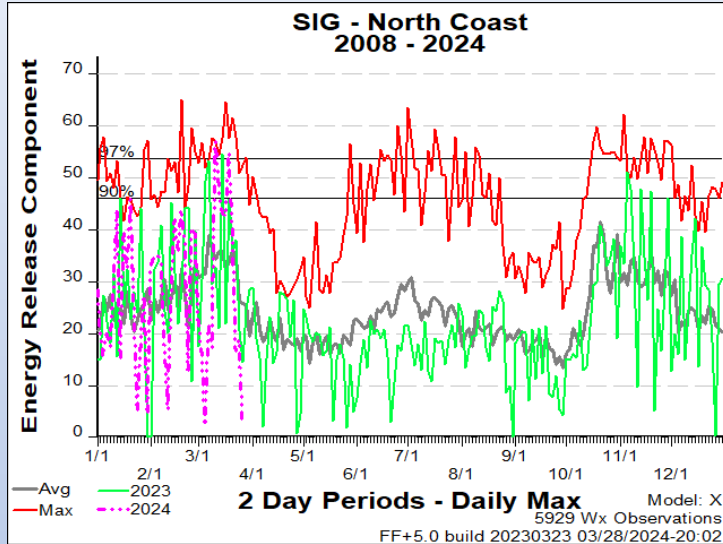
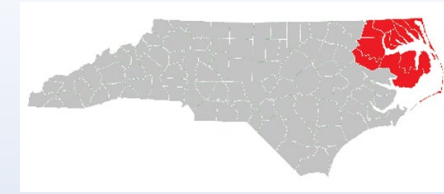
Values in the table above are averages from 3 stations in this FDRA:

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

KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
<b>Avg. Max. Temp.</b>	Less than 50°F	Between 50°F and 60°F	Greater than 60°F
<b>Avg. Min. Humidity</b>	Greater than 40%	Between 30% and 40%	Less than 30%
<b>Avg. 20' Wind Speed</b>	Less than 4 mph	Between 4 mph and 8 mph	Greater than 8 mph
<b>Avg. Wind Direction*</b>	Criticality of wind direction is highly dependent on burn operations and/or structures threatened.		
<b>Days Since a Wetting Rain**</b>	A wetting rain is defined as 0.10" or greater. This is an average of the FDRA stations noted above.		
<b>Energy Release Comp.</b>	Less than 52.4	Between 52.4 and 62	Greater than 62
<b>Burning Index</b>	Less than 45.6	Between 45.6 and 53.3	Greater than 53.3
<b>Ignition Component</b>	Less than 13.6	Between 13.6 and 18.8	Greater than 18.8
<b>100-Hour Fuel Moisture</b>	Greater than 17.4%	Between 16% and 17.4%	Less than 16%
<b>1000-Hour Fuel Moisture</b>	Greater than 18.2%	Between 17.2% and 18.2%	Less than 17.2%
<b>KBDI</b>	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 29-Mar	SAT 30-Mar	SUN 31-Mar	MON 01-Apr	TUE 02-Apr	WED 03-Apr	THU 04-Apr
Avg. Max. Temp. (°F)	66	74	78	79	81	69	61
Avg. Min. Humidity (%)	42	38	46	52	52	59	35
Avg. 20' Wind Speed (mph)	9	6	8	7	11	15	15
Avg. Wind Direction*	WNW	WSW	WSW	SW	SW	WSW	WNW
Avg. Probability of Precip. (%)	1	1	11	13	51	52	5
Days Since a Wetting Rain**	2.0	3.0	4.0				
Forecast ERC (Fuel Model X)	9.5	15.6	16.6	11.8	8.0	6.2	14.5
Forecast BI (Fuel Model X)	34.1	35.0	30.5	24.4	24.6	21.6	31.7
Forecast IC (Fuel Model X)	2.8	4.2	4.2	2.8	2.3	1.5	3.9
Forecast 100-Hr. FMC	23.8	23.6	21.6	21.0	21.1	22.0	21.9
Forecast 1000-Hr. FMC	23.2	23.2	23.2	23.2	23.2	23.2	23.1
KBDI	3.0						

#### 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.

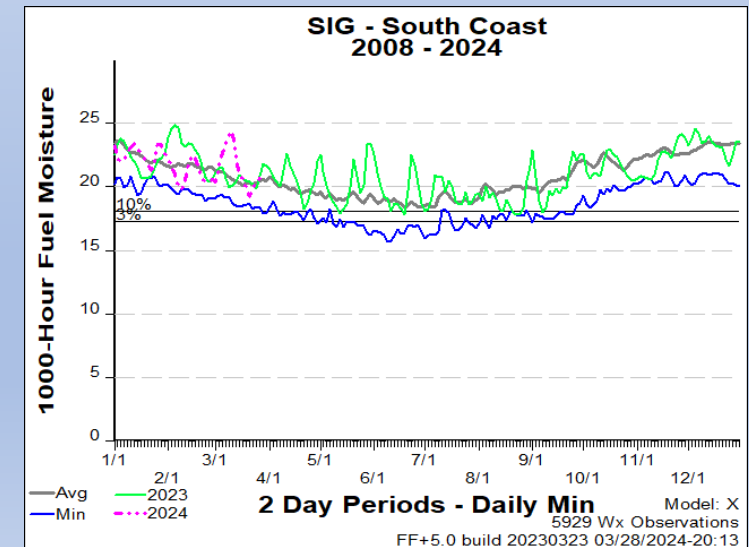
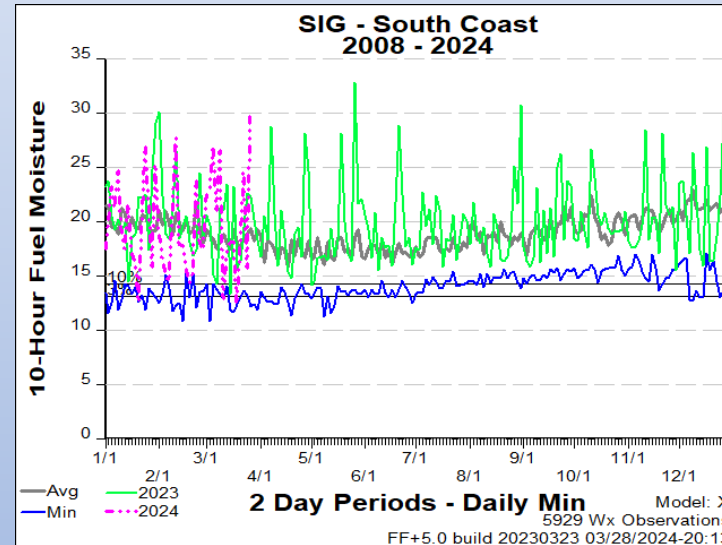
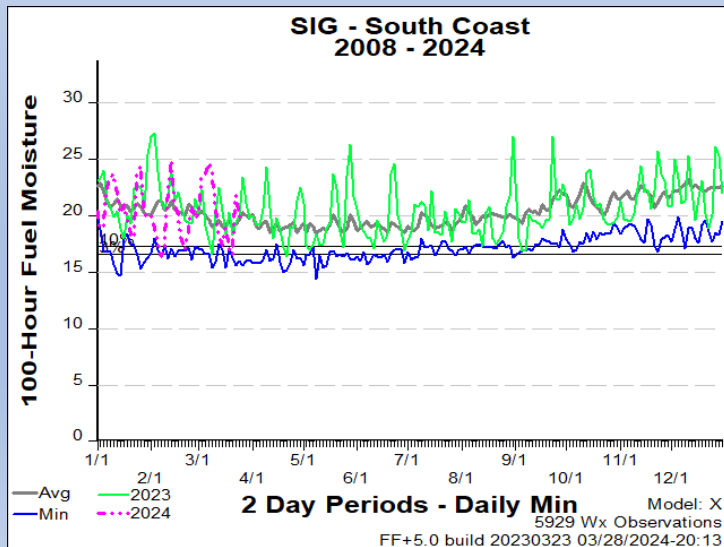
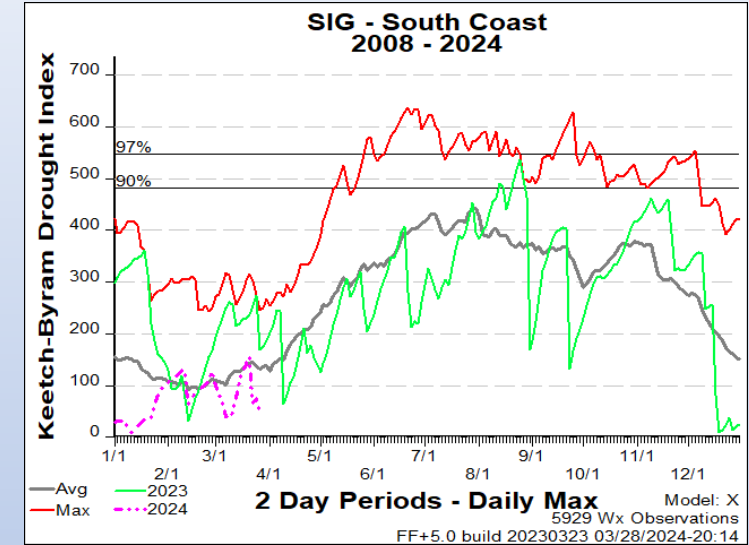
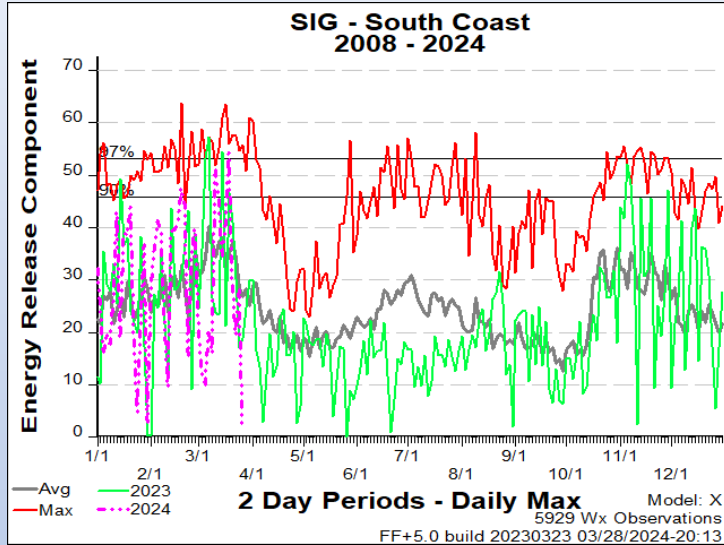
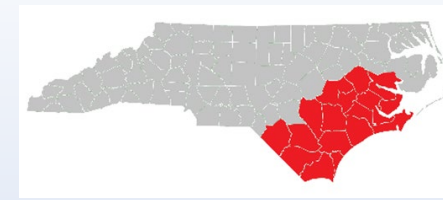
Values in the table above are averages from 4 stations in this FDRA:

- 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 29-Mar	SAT 30-Mar	SUN 31-Mar	MON 01-Apr	TUE 02-Apr	WED 03-Apr	THU 04-Apr
Avg. Max. Temp. (°F)	70	75	80	82	83	72	64
Avg. Min. Humidity (%)	34	35	42	48	50	47	31
Avg. 20' Wind Speed (mph)	9	7	8	9	12	15	14
Avg. Wind Direction*	W	WSW	WSW	SW	SW	WSW	WNW
Avg. Probability of Precip. (%)	0	0	4	7	47	44	4
Days Since a Wetting Rain**	2.0	3.0	4.0				
Forecast ERC (Fuel Model X)	24.2	38.7	41.2	27.7	22.1	15.0	33.3
Forecast BI (Fuel Model X)	82.6	99.6	88.0	75.8	79.8	61.2	102.1
Forecast IC (Fuel Model X)	6.4	10.9	10.8	8.1	8.6	5.8	12.9
Forecast 100-Hr. FMC	23.4	22.3	20.0	19.4	19.8	20.6	20.5
Forecast 1000-Hr. FMC	23.1	23.1	23.1	23.1	22.9	22.9	22.7
KBDI	35.0						

#### 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 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



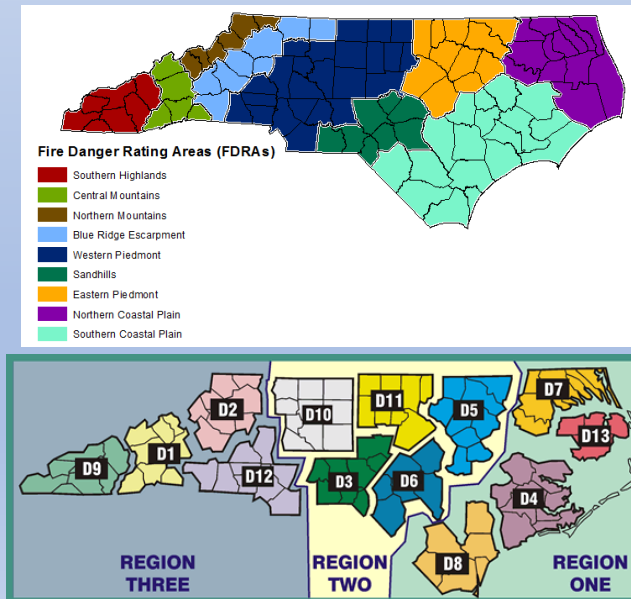
# Outlook Summary Tables – Organized by Region –

Output from NFRS  
forecast generated on  
3/28/24 using 1300 Obs.

Summary Table by FDRA using count of colored blocks in a day's forecast.

Key: 4+ Red Blocks on a Day = "Critical" Day Potential; Red Color  
4+ Yellow or Combo of Yellow/Red = "High" Day Potential; Yellow Color  
6+ Blue-Green Blocks = "Low to Mod" Potential Day; Blue-green Color

These summary tables provide a generalization applied across the FDRA, based upon daily weather and NFRS forecasts projected through seven days. Forecasts and resulting outputs will change significantly over time & also depend upon actual precip amount/duration. Local factors should also be considered.



Date	Day of Week	FDRA Weekly Outlook - Matrix Summary - NCFS Region 1	
		North Coast	South Coast
29-Mar	Fri	Low/Mod	Low/Mod
30-Mar	Sat	Low/Mod	High -
31-Mar	Sun	Low/Mod	High -
1-Apr	Mon	Low/Mod	High -
2-Apr	Tues	Low/Mod	High -
3-Apr	Wed	Low/Mod	Low/Mod
4-Apr	Thurs	Low/Mod +	Critical -

Date	Day of Week	FDRA Weekly Outlook - Matrix Summary - NCFS Region 2				
		Blue Ridge Escarp	Western Piedmont	Eastern Piedmont	Sandhills	South Coast
29-Mar	Fri	High +	High	Low/Mod +	Low/Mod	Low/Mod
30-Mar	Sat	High +	High	Low/Mod +	High	High -
31-Mar	Sun	Critical	Low/Mod +	Low/Mod	High	High -
1-Apr	Mon	Critical -	Low/Mod +	Low/Mod	Low/Mod +	High -
2-Apr	Tues	High -	Low/Mod	Low/Mod	Low/Mod +	High -
3-Apr	Wed	High -	Low/Mod +	Low/Mod	High -	Low/Mod
4-Apr	Thurs	High	Low/Mod +	Low/Mod +	High	Critical -

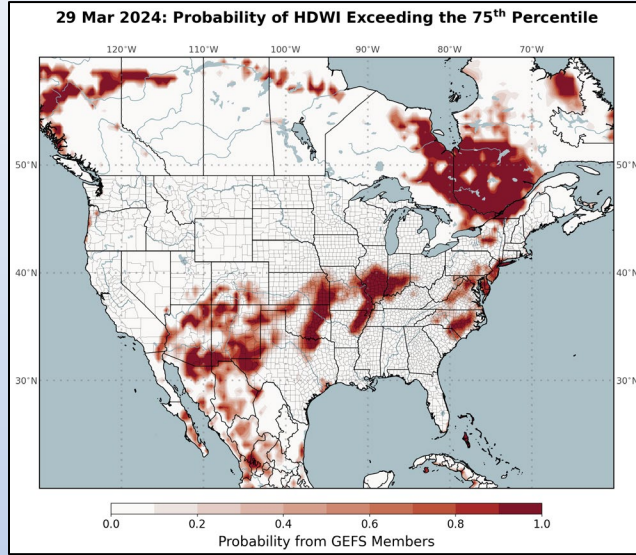
Date	Day of Week	FDRA Weekly Outlook - Matrix Summary - NCFS Region 3				
		Southern Highlands	Central Mountains	Northern Highlands	Blue Ridge Escarp	Western Piedmont
29-Mar	Fri	Critical -	Critical -	Critical -	High +	High
30-Mar	Sat	Critical	Critical	Critical -	High +	High
31-Mar	Sun	High	High +	High +	Critical	Low/Mod +
1-Apr	Mon	Low/Mod +	High	High	Critical -	Low/Mod +
2-Apr	Tues	Low/Mod	High -	High -	High -	Low/Mod
3-Apr	Wed	High	Low/Mod +	High -	High -	Low/Mod +
4-Apr	Thurs	High	High	High -	High	Low/Mod +

# Statewide Slides

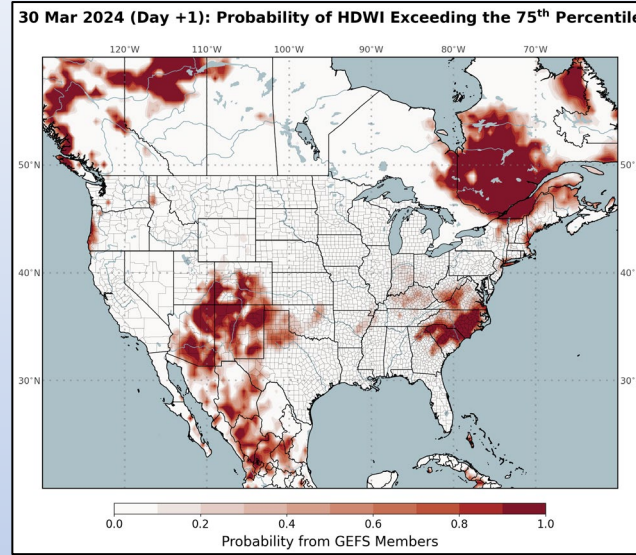


# Hot-Dry-Windy Index (HDW)

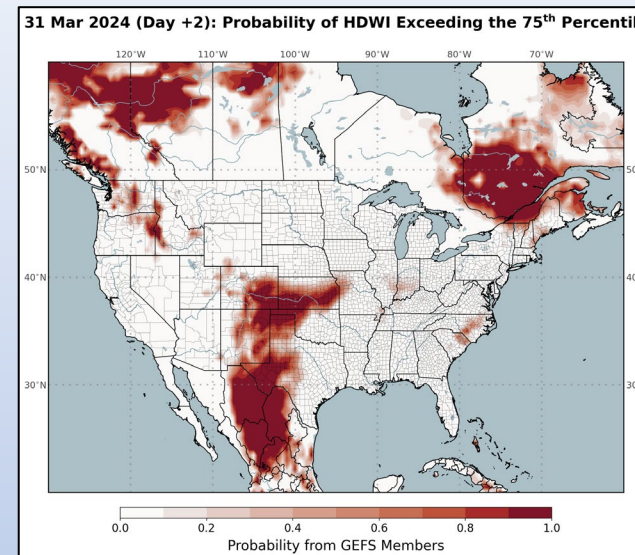
Friday > 75<sup>th</sup> Percentile



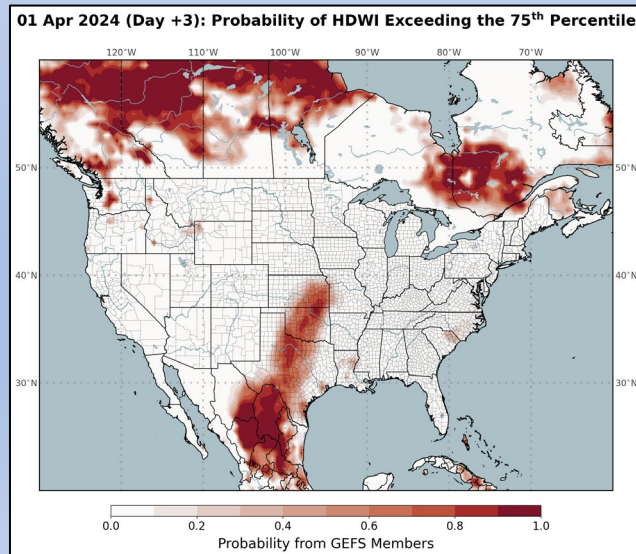
Saturday > 75<sup>th</sup> Percentile



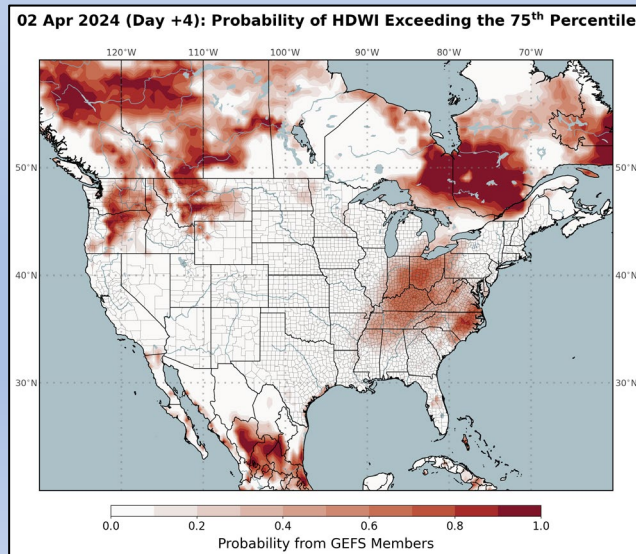
Sunday > 75<sup>th</sup> Percentile



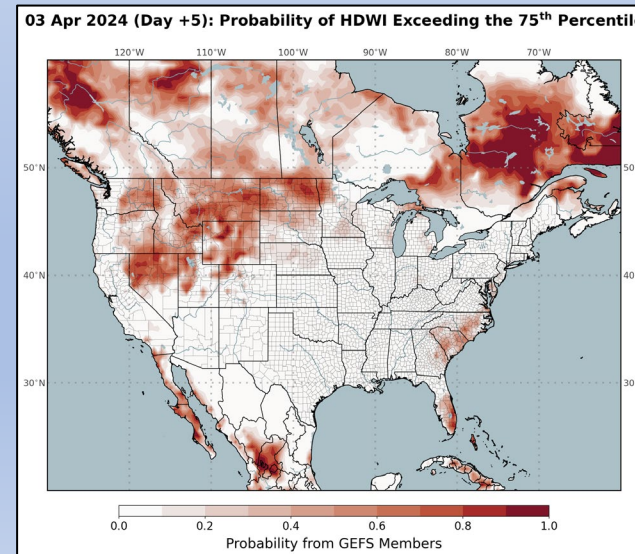
Monday > 75<sup>th</sup> Percentile



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

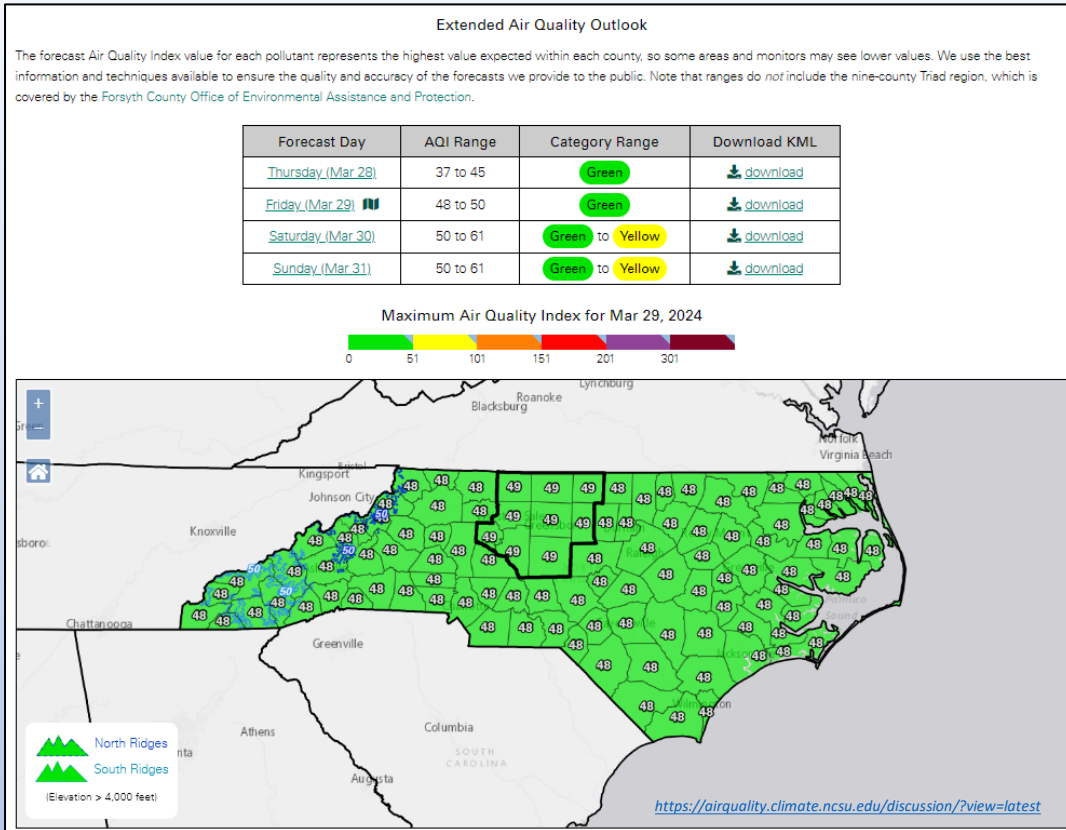
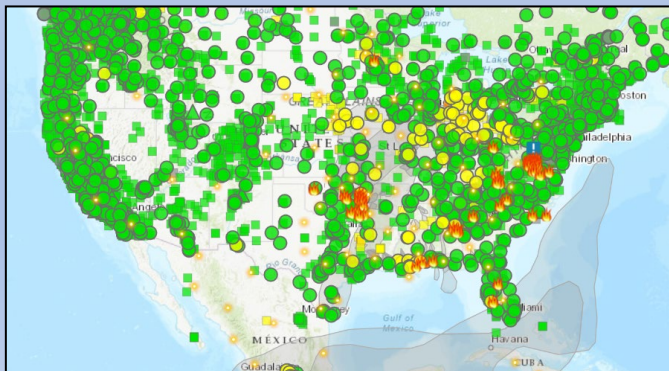
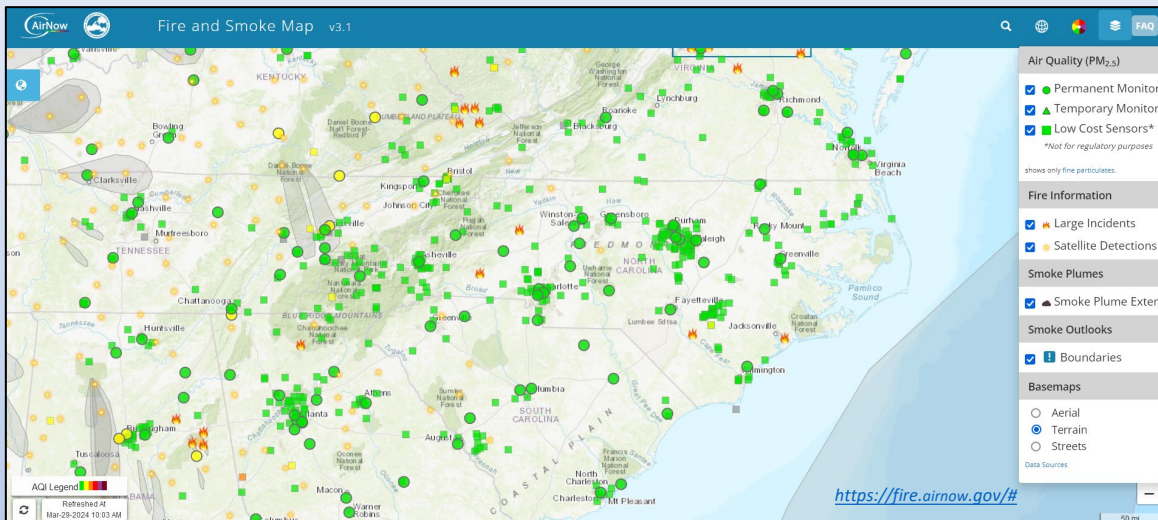


Wednesday > 75<sup>th</sup> Percentile



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

# Air Quality Notes



## NCDQA Forecaster Discussion (Thursday - PM)

### General Forecast Discussion

On Friday, surface high pressure will begin to build in over the southeastern states. Concurrently, the deepening coastal low will be located near the New England/Canadian Maritimes region. The pressure gradient between these two synoptic features will tighten and produce strong WNW winds on Friday afternoon/evening. Decent vertical mixing should keep particle pollution in the mid Code Green range. Ozone concentrations will likely reach the upper Code Green range thanks to clear skies and dry conditions.

### Outlook

By Saturday, the surface high will be centered off the FL coast and low-level flow will shift out of the SW. Although temps will begin to rise, dewpoints will remain low. Ozone levels could reach into the low Code Yellow range in portions of the interior on Saturday owing to abundant sunshine and the low relative humidity. Right now, particle pollution will likely hover in the upper Code Green range across the state. However, if prescribed burning activity in the region were to increase on Saturday, daily average particle pollution may creep into the moderate range. We'll be monitoring fire activity and make any warranted forecast adjustments. **The air mass will begin to stagnate on Sunday**, with Code Yellow ozone and fine particulate conditions possible in portions of the interior.



# ENSO Notes from the CPC (3/14/24 Update)

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

A transition from El Niño to ENSO-neutral is likely by April-June 2024 (83% chance), with the odds of La Niña developing by June-August 2024 (62% chance).

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

## Historical El Niño and La Niña Episodes Based on the ONI computed using ERSST.v5

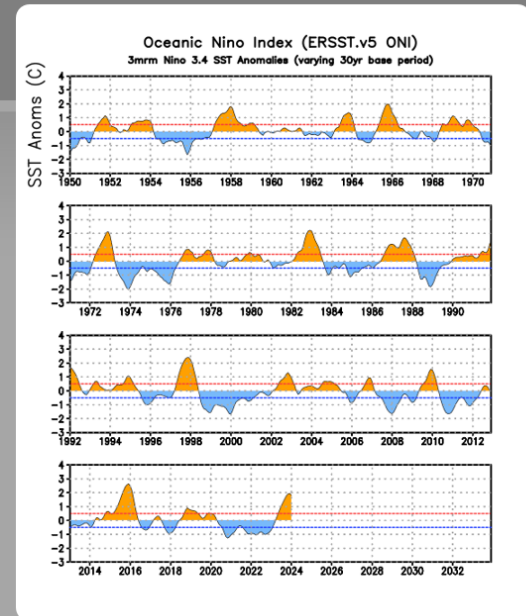
Recent Pacific warm (red) and cold (blue) periods based on a threshold of  $\pm 0.5^{\circ}\text{C}$  for the Oceanic Niño Index (ONI) [3 month running mean of ERSST.v5 SST anomalies in the Niño 3.4 region (5N-5S, 120-170W)]. For historical purposes, periods of below and above normal SSTs are colored in blue and red when the threshold is met for a minimum of 5 consecutive over-lapping seasons.

The ONI is one measure of the El Niño-Southern Oscillation, and other indices can confirm whether features consistent with a coupled ocean-atmosphere phenomenon accompanied these periods. The complete table going back to DJF 1950 can be found [here](#).

Year	DJF	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	OND	NDJ
2012	-0.9	-0.7	-0.6	-0.5	-0.3	0.0	0.2	0.4	0.4	0.3	0.1	-0.2
2013	-0.4	-0.4	-0.3	-0.3	-0.4	-0.4	-0.4	-0.3	-0.3	-0.2	-0.2	-0.3
2014	-0.4	-0.5	-0.3	0.0	0.2	0.2	0.0	0.1	0.2	0.5	0.6	0.7
2015	0.5	0.5	0.5	0.7	0.9	1.2	1.5	1.9	2.2	2.4	2.6	2.6
2016	2.5	2.1	1.6	0.9	0.4	-0.1	-0.4	-0.5	-0.6	-0.7	-0.7	-0.6
2017	-0.3	-0.2	0.1	0.2	0.3	0.3	0.1	-0.1	-0.4	-0.7	-0.8	-1.0
2018	-0.9	-0.9	-0.7	-0.5	-0.2	0.0	0.1	0.2	0.5	0.8	0.9	0.8
2019	0.7	0.7	0.7	0.7	0.5	0.5	0.3	0.1	0.2	0.3	0.5	0.5
2020	0.5	0.5	0.4	0.2	-0.1	-0.3	-0.4	-0.6	-0.9	-1.2	-1.3	-1.2
2021	-1.0	-0.9	-0.8	-0.7	-0.5	-0.4	-0.4	-0.5	-0.7	-0.8	-1.0	-1.0
2022	-1.0	-0.9	-1.0	-1.1	-1.0	-0.9	-0.8	-0.9	-1.0	-1.0	-0.9	-0.8
2023	-0.7	-0.4	-0.1	0.2	0.5	0.8	1.1	1.3	1.6	1.8	1.9	2.0
2024	1.8											

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

The most recent ONI value (December 2023 - February 2024) is  $1.8^{\circ}\text{C}$ .

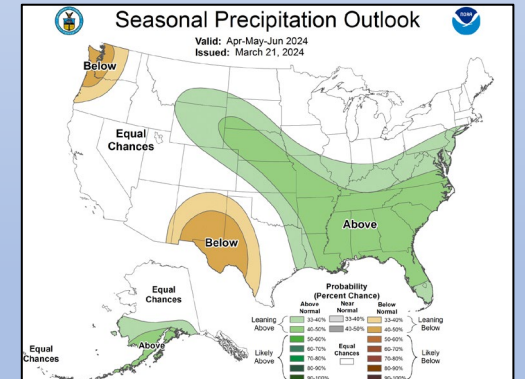
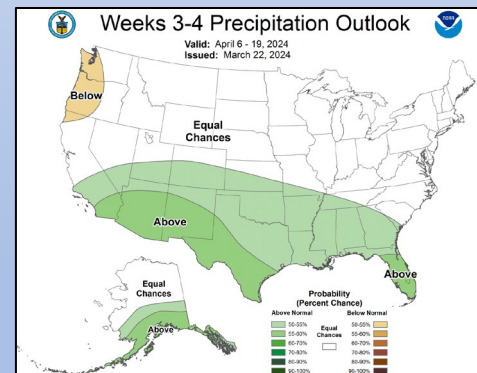
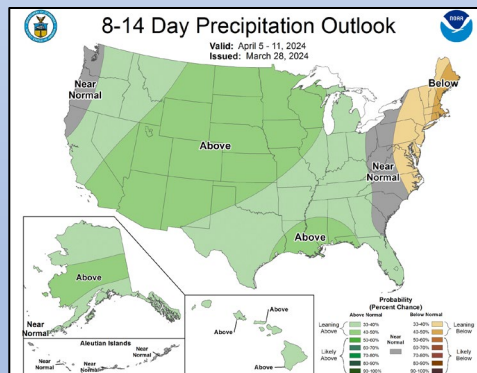
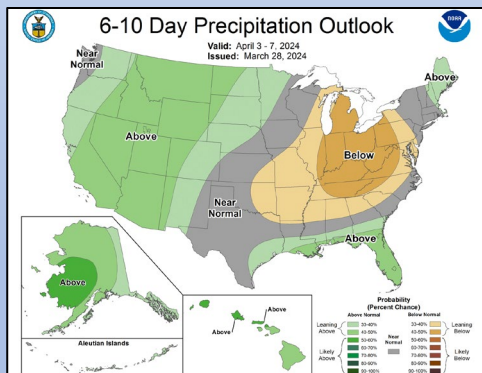
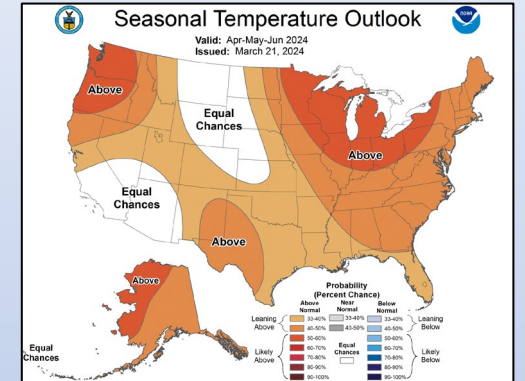
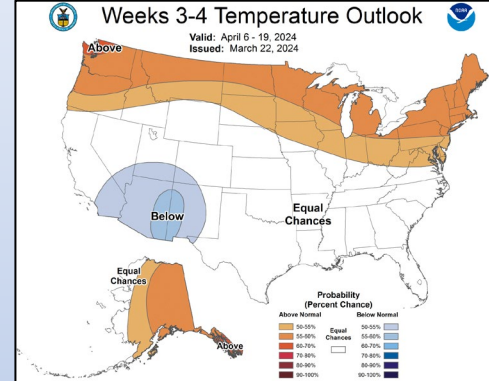
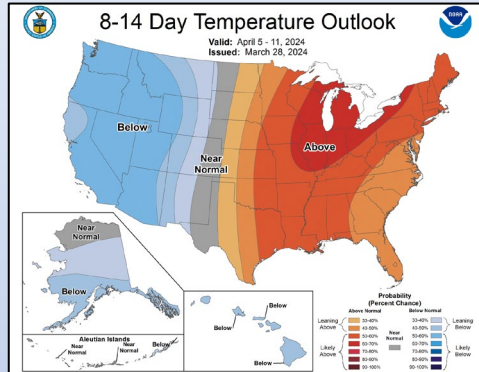
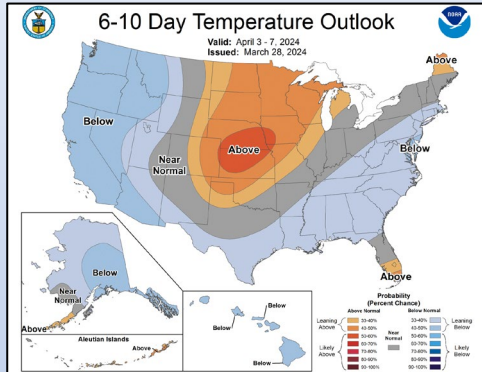


From the most recent CPC Diagnostic Discussion ([ENSO Diagnostics Discussion](#)):

[The most recent IRI plume indicates a transition to ENSO-neutral during spring 2024, with La Niña potentially developing during summer 2024 [Fig. 6]. While different types of models suggest La Niña will develop, the forecast team favors the dynamical model guidance, which is slightly more accurate for forecasts made during this time of year. Even though forecasts made through the spring season tend to be less reliable, there is a historical tendency for La Niña to follow strong El Niño events. In summary, a transition from El Niño to ENSO-neutral is likely by April-June 2024 (83% chance), with the odds of La Niña developing by June-August 2024 (62% chance; [Fig. 7]).]

# CPC Temp & Precip Outlook

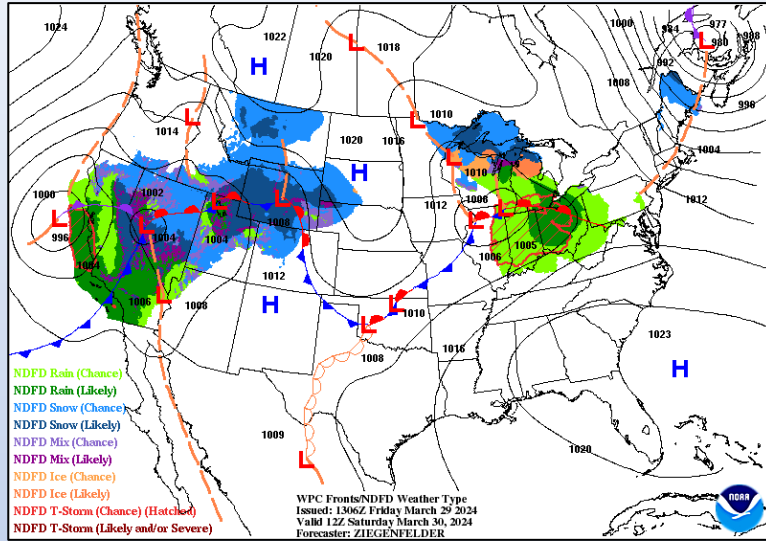
6-10 Day, 8-14 Day, Weeks 3-4, Seasonal



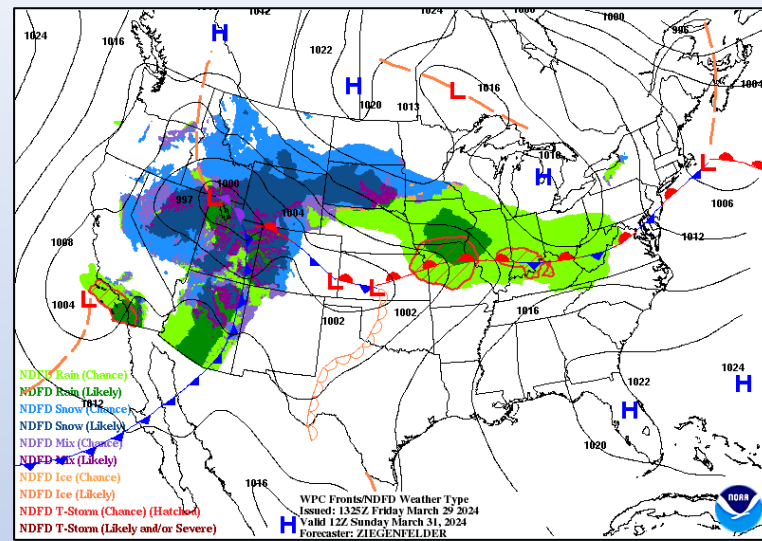
Potential drying trend for the next week or two.

# WPC Forecasted Surface Fronts & Sea-Level Pressures

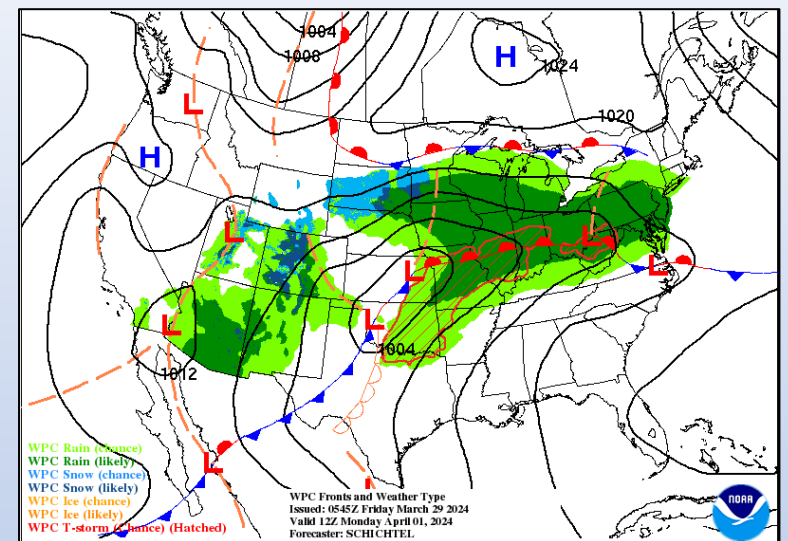
Saturday - 800 am



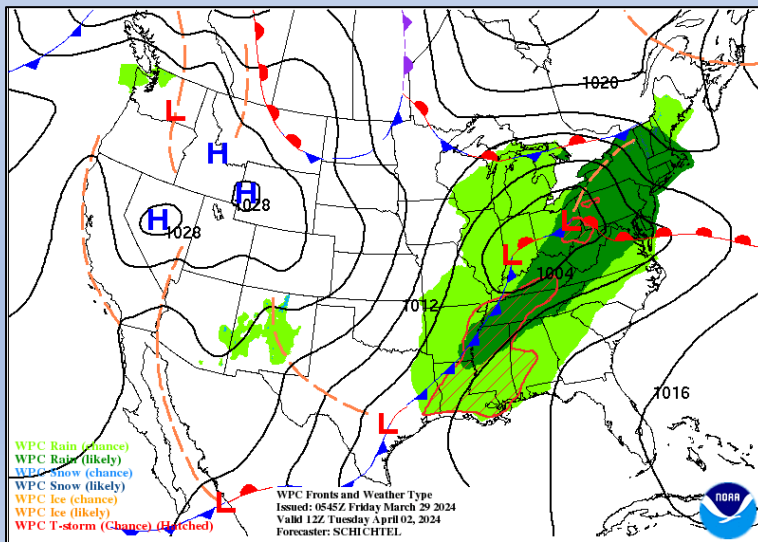
Sunday - 800 am



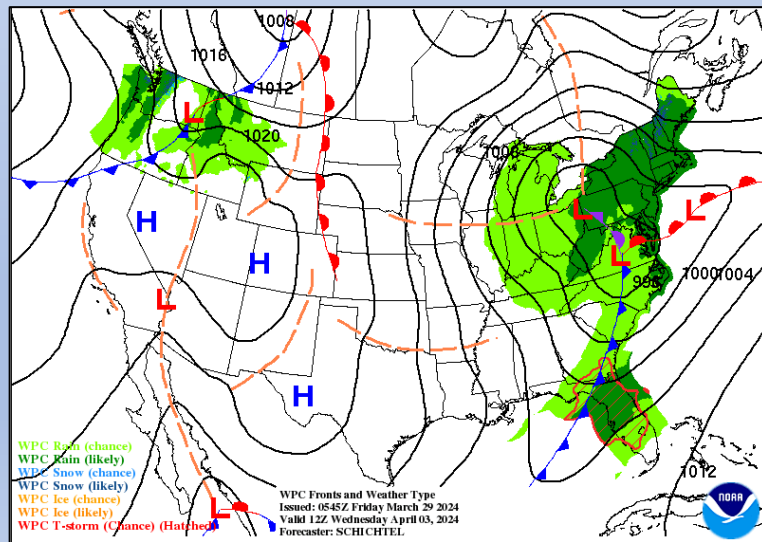
Monday - 800 am



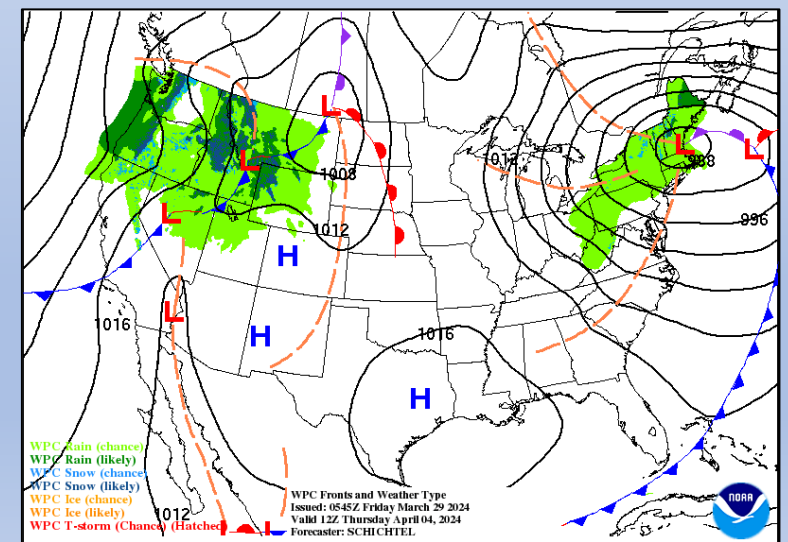
Tuesday - 800 am



Wednesday - 800 am



Thursday - 800 am

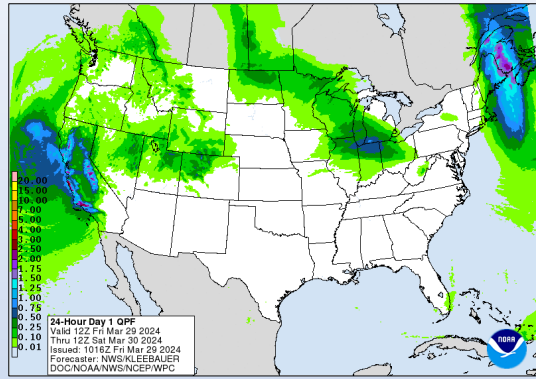




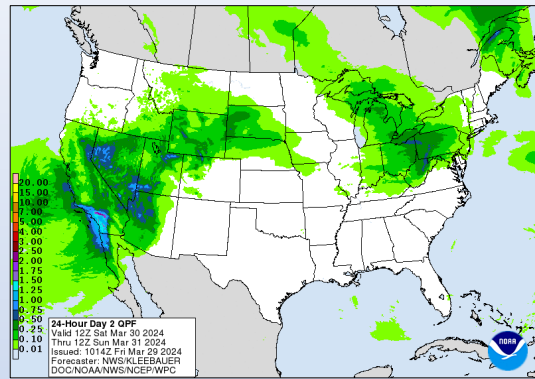
# Quantitative Precipitation Forecast, 7-Day

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

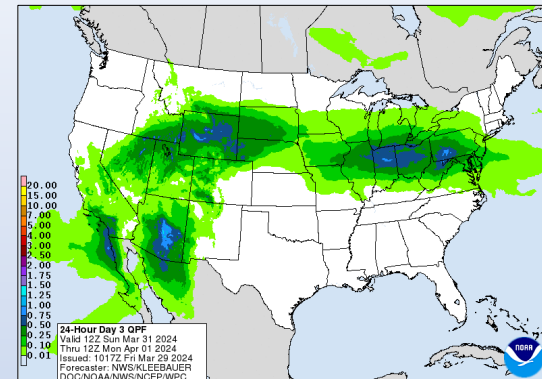
Day - 1



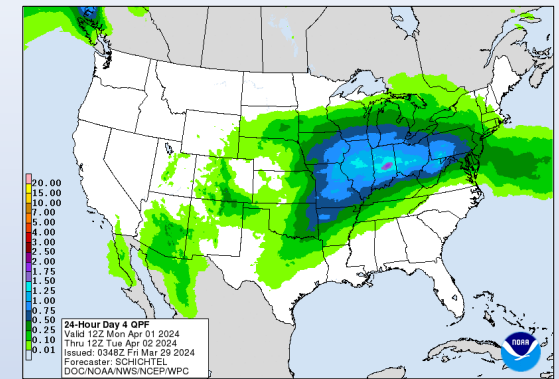
Day - 2



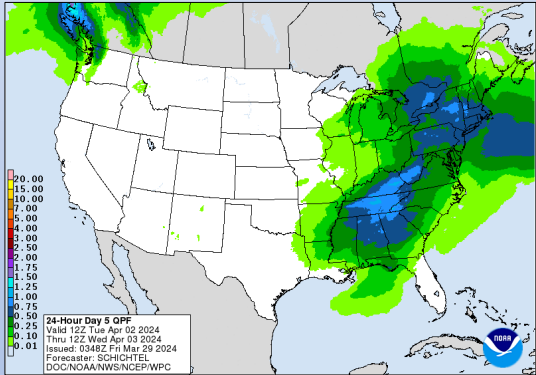
Day - 3



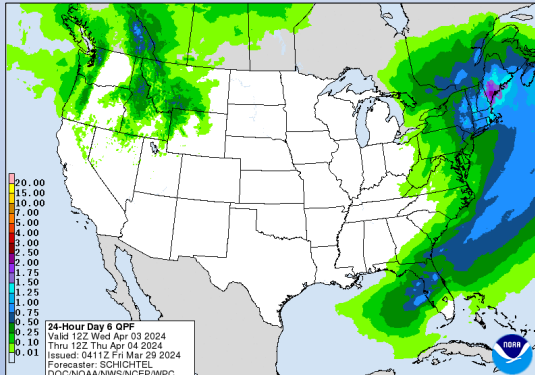
Day - 4



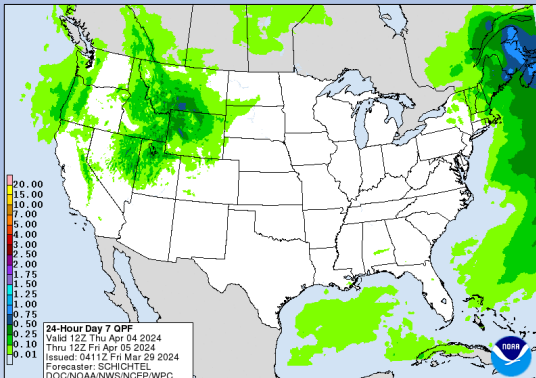
Day - 5



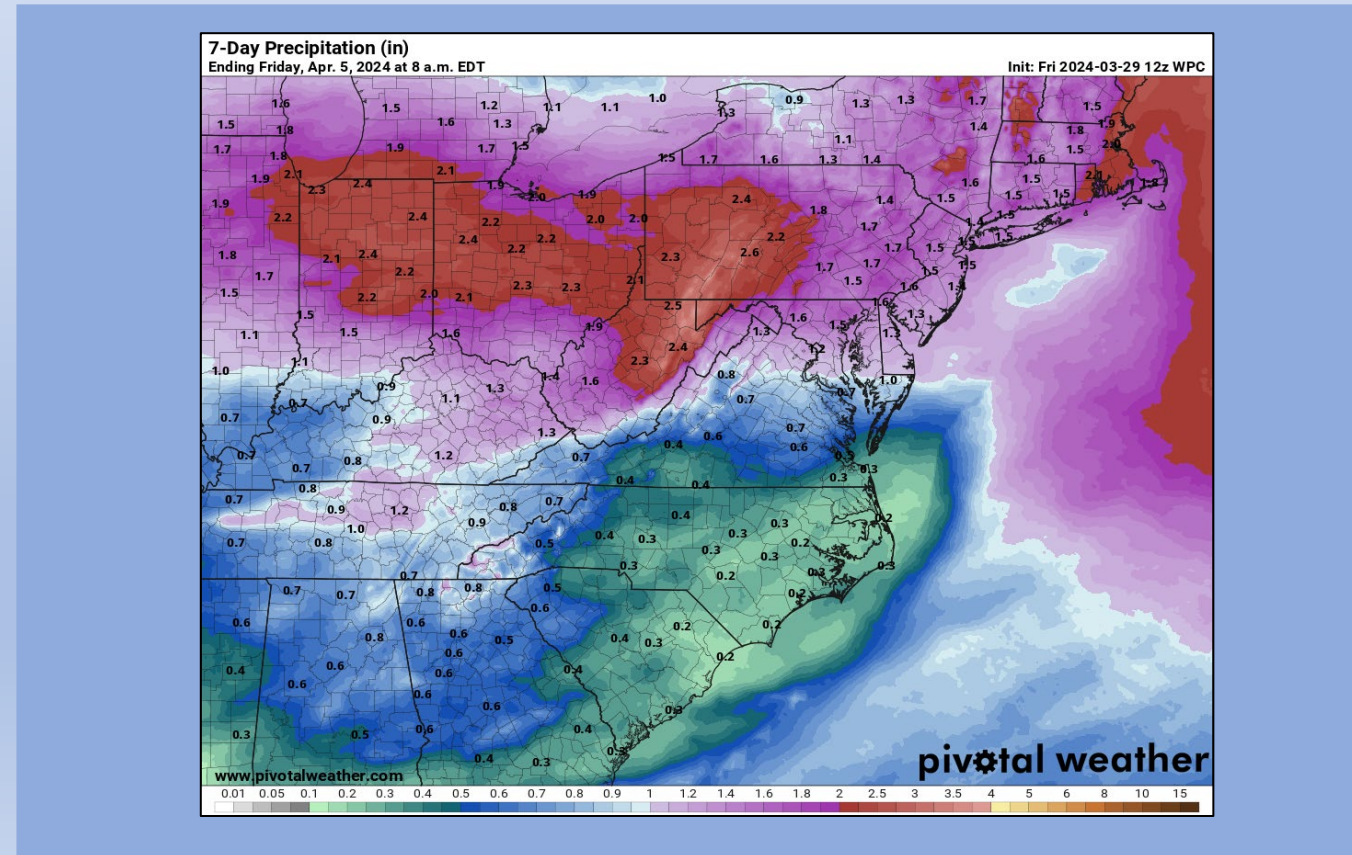
Day - 6



Day - 7



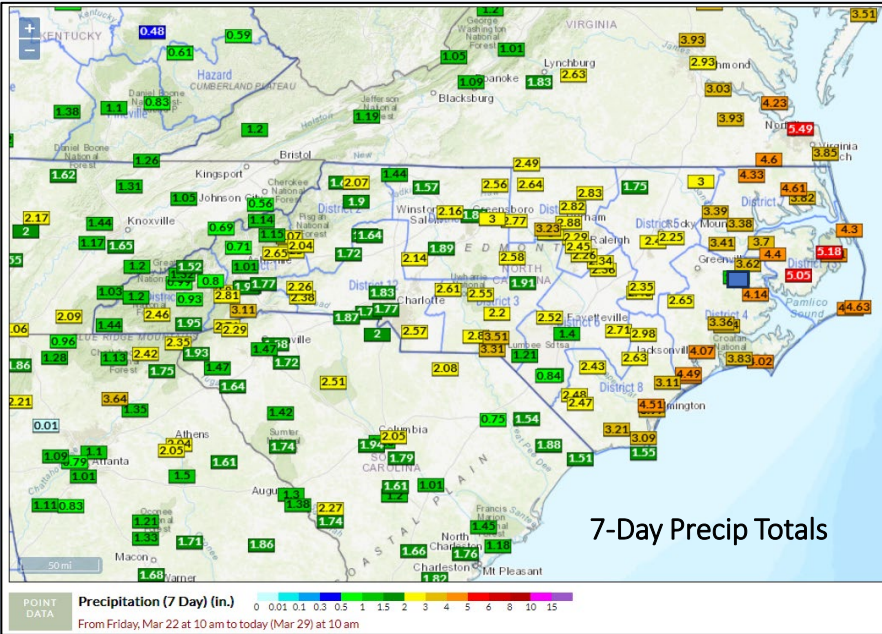
*\*Important to note these values are subject to **significant change** as weather system modeled tracks adjust farther out in time.*



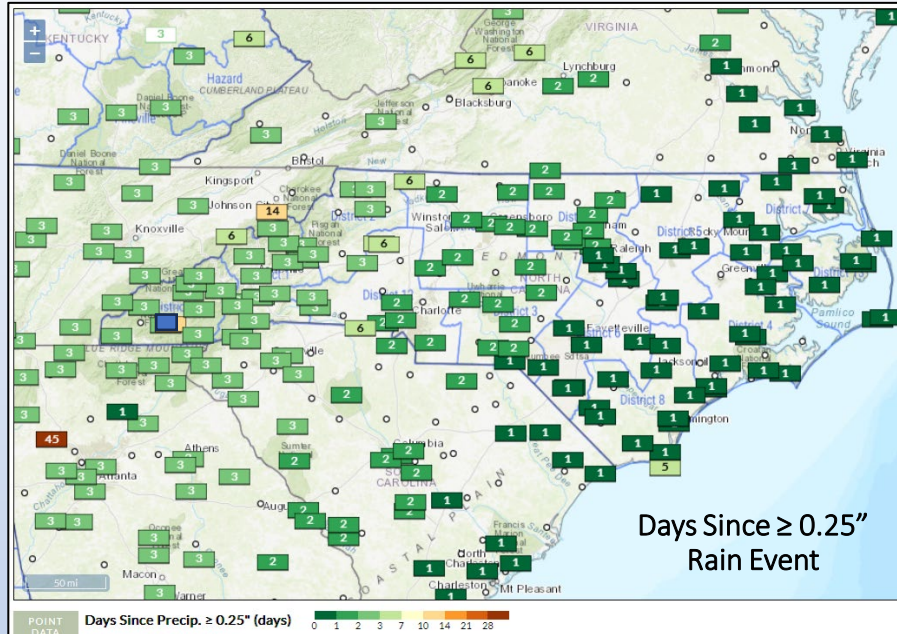


# Observed Precipitation

Note: Known issue with Beaufort  
RAWS Rain Gauge & Locust Gap RAWs  
o/s and in process of being repaired.



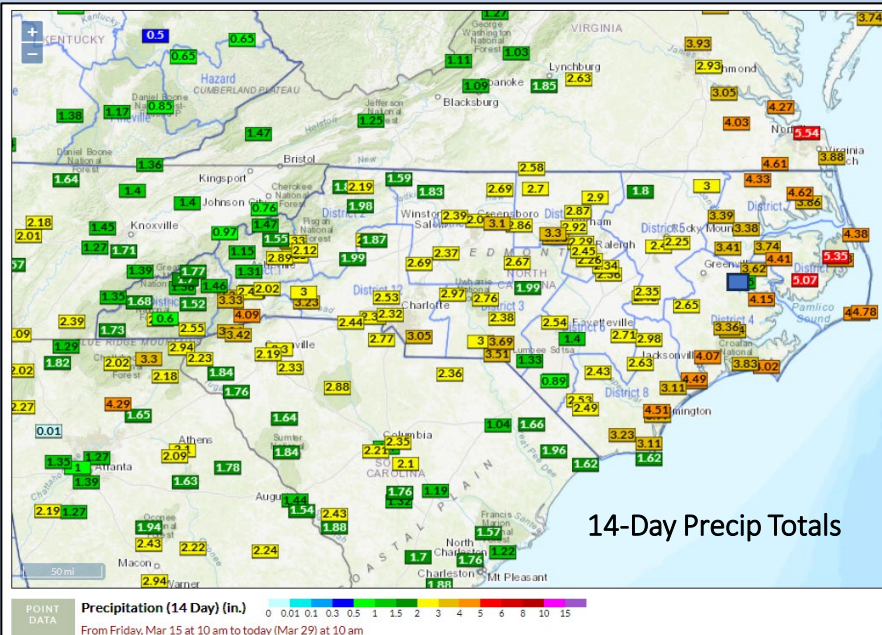
7-Day Precip Totals



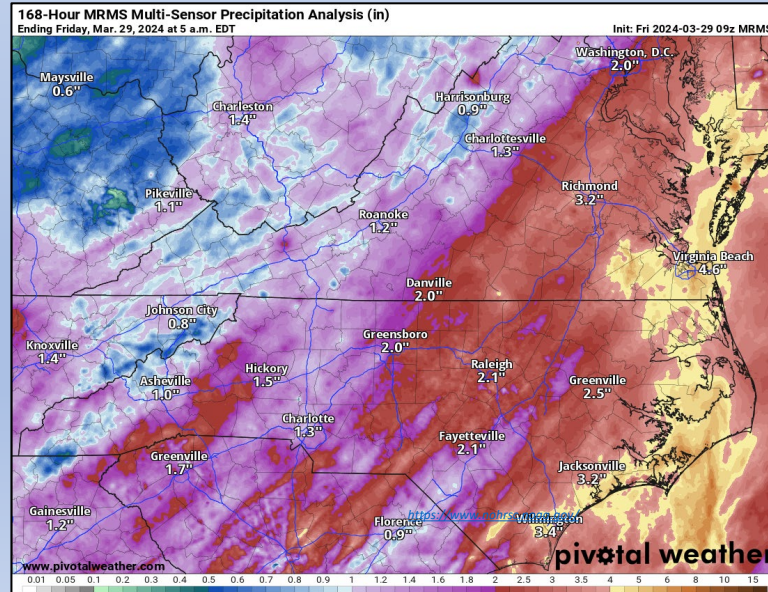
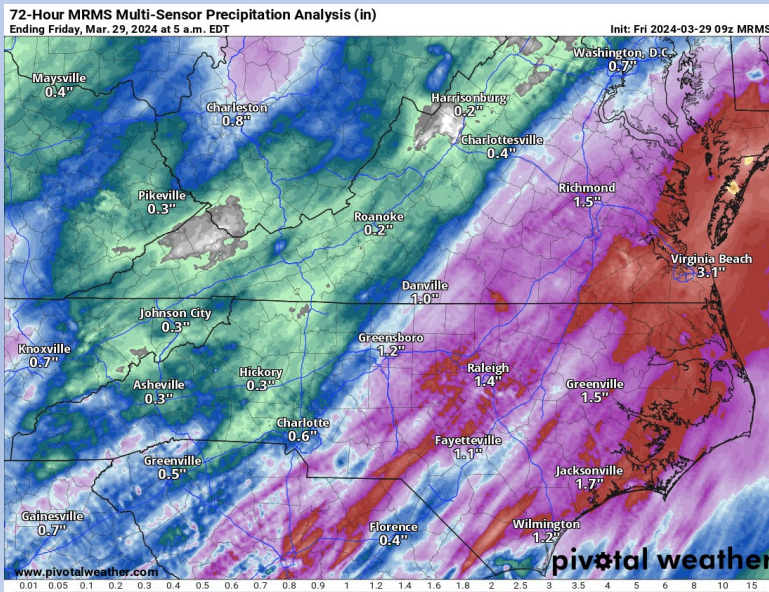
Days Since  $\geq 0.25''$   
Rain Event

3-Day Estimated Totals

7-Day Estimated Totals



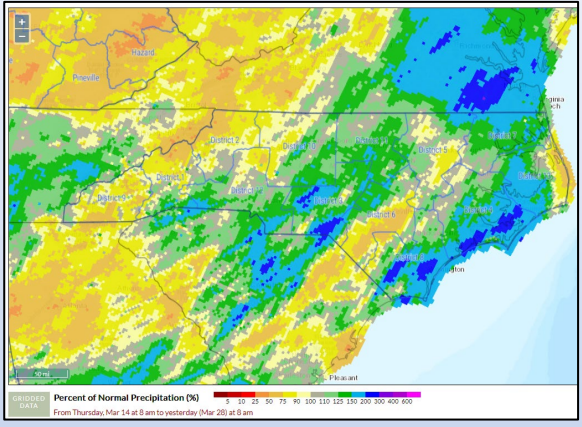
14-Day Precip Totals





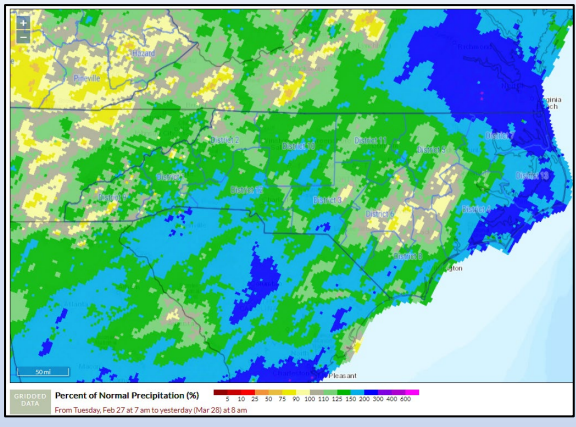
# Percent of Normal Precip & SPI, FWIP *(Ending Thursday @ 0800 3/28, before rain event ended)*

14-Day % of Normal



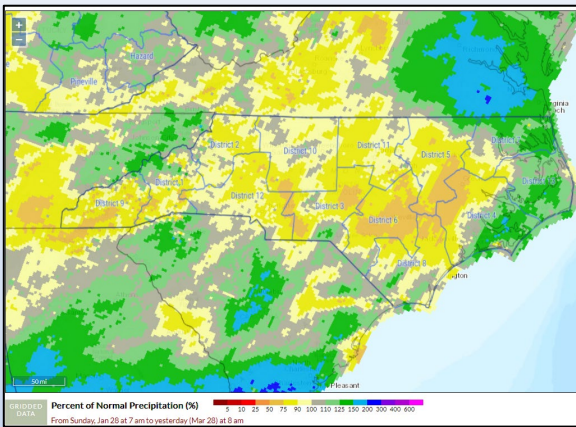
PNP: ~50% of Normal along NW D-2 areas at 14-day Scale

30-Day % of Normal



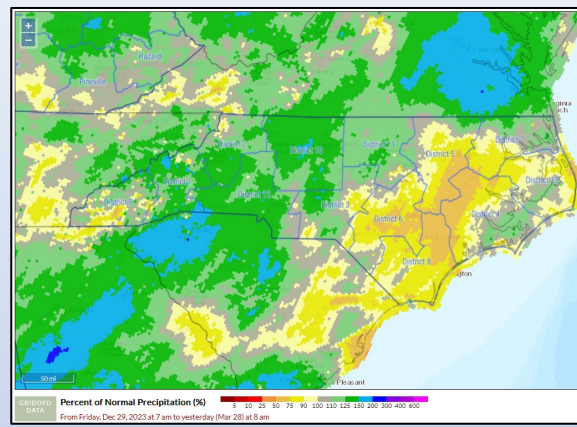
Driest areas at ~75% of normal at 1-Month scale.

60-Day % of Normal



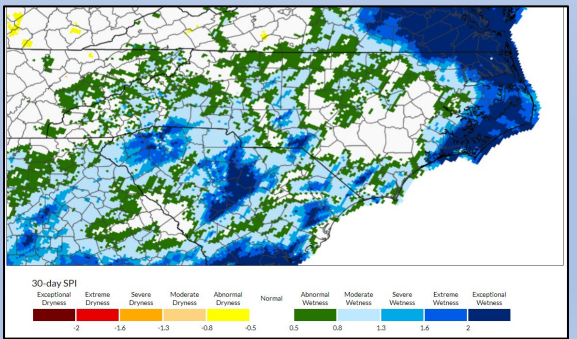
Driest areas at ~65% of normal at 2-Month scale.

90-Day % of Normal

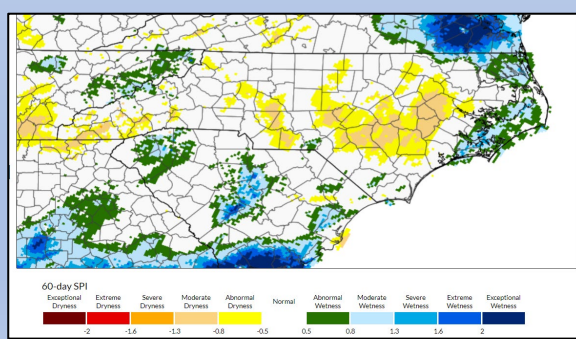


Driest areas ~65-70% of normal at 3-Month scale.

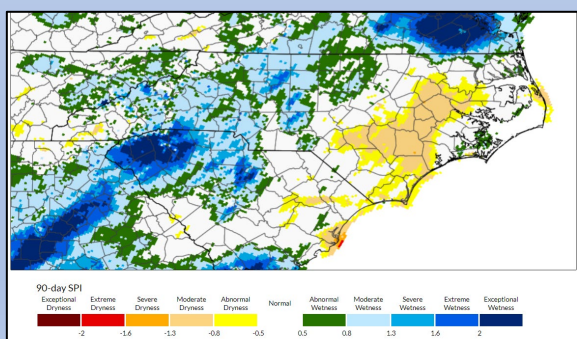
30-Day SPI



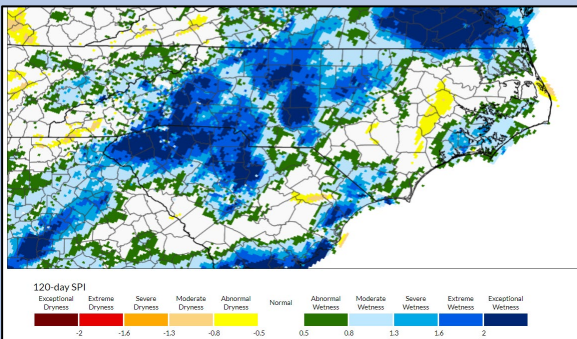
60-Day SPI



90-Day SPI



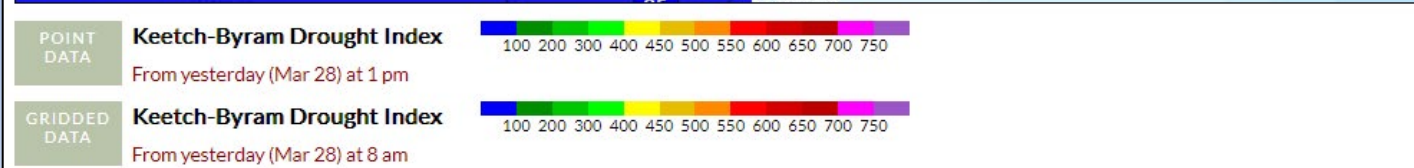
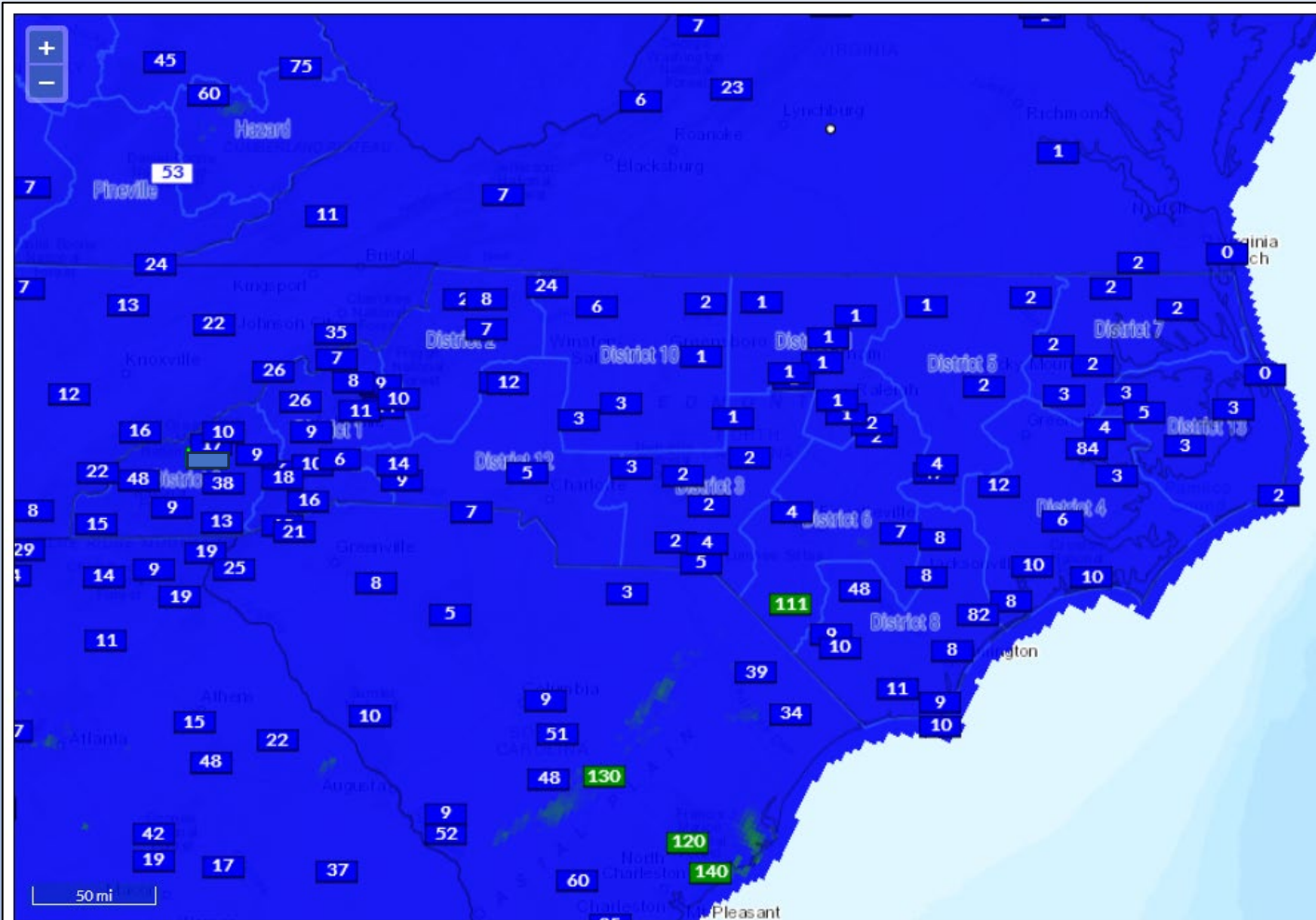
120-Day SPI



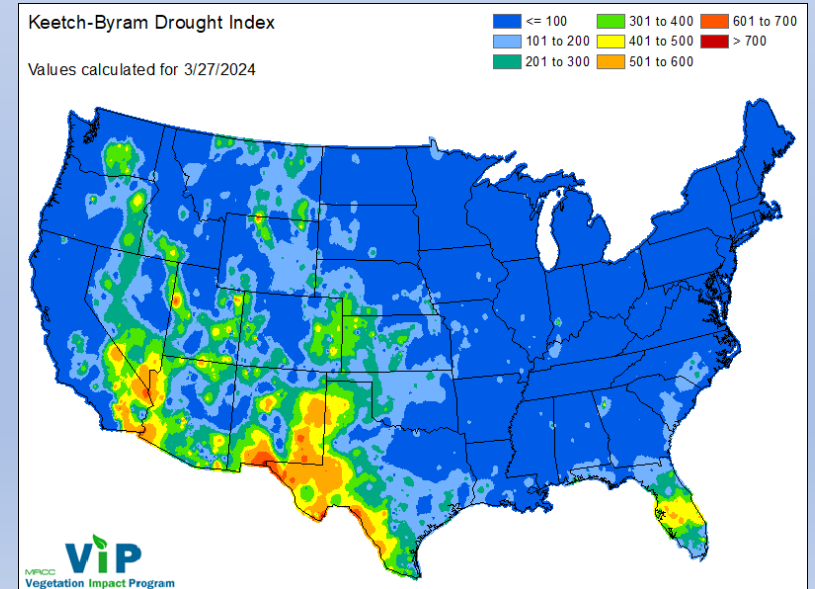
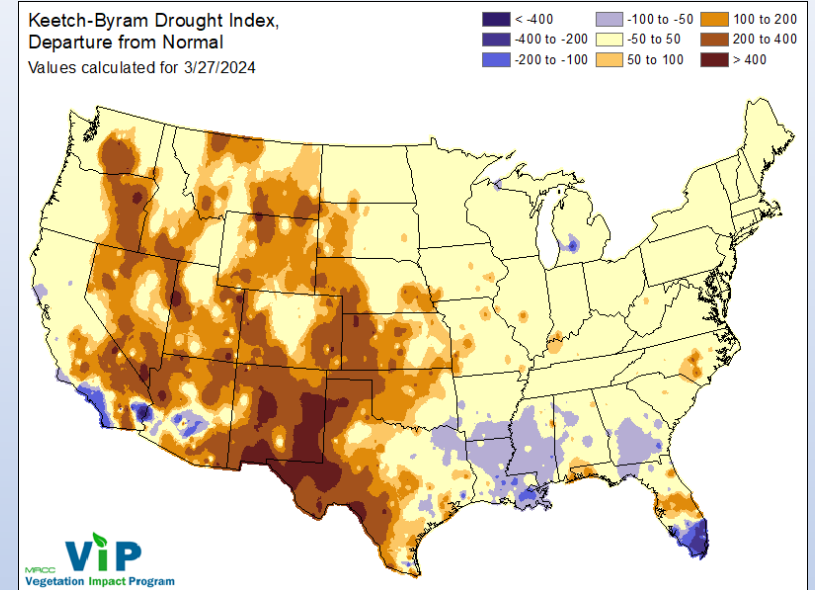


# KBDI - Gridded & Station Points

FWIP (Point calculation from WIMS @ 1300 on 3/28/24, SCO created Grid ending 0800 3/28/24)

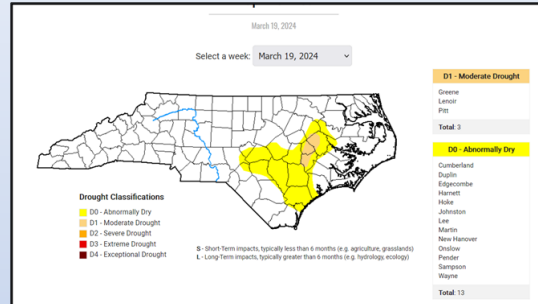


Product below is created by the Midwestern Regional Climate Center. See [FAQ](#).

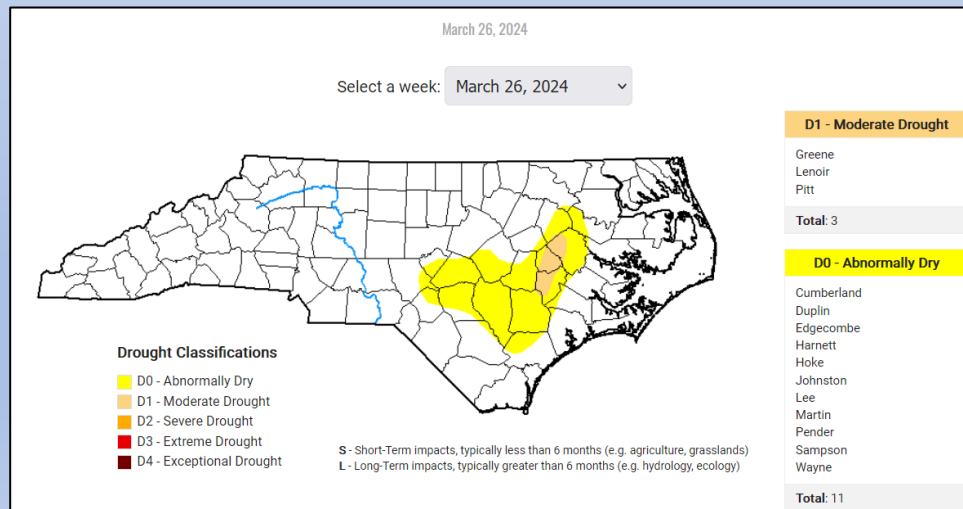


# Drought Situation

## Previous Week:



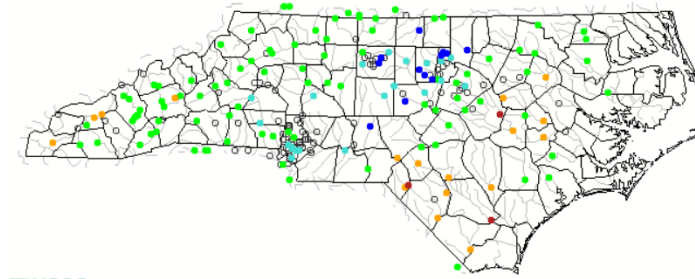
## Current Week:



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

North Carolina or Water-Resources Regions All Days

Thursday, March 28, 2024



Search USGS streamgage

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

### Explanation - Percentile classes

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

- D-0 Abnormally Dry Conditions decreased (~12% of State)
- D-1 Moderate Drought decreased (~1.3% of State)

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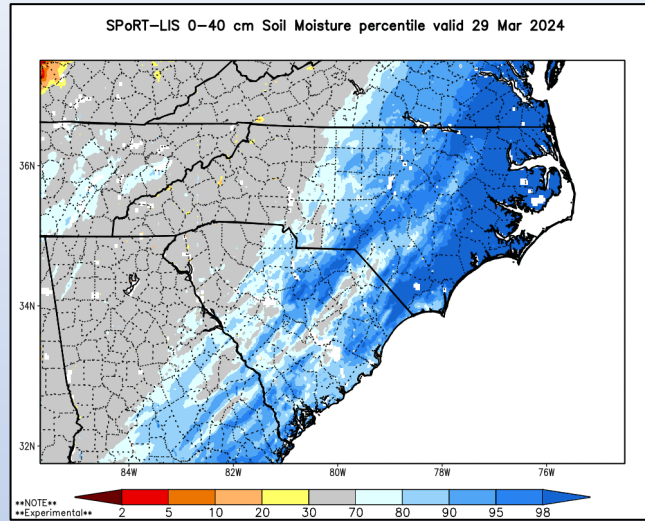
- 7-Day Stream flow averages have generally been in the normal range to the west. Were declining again, especially east.

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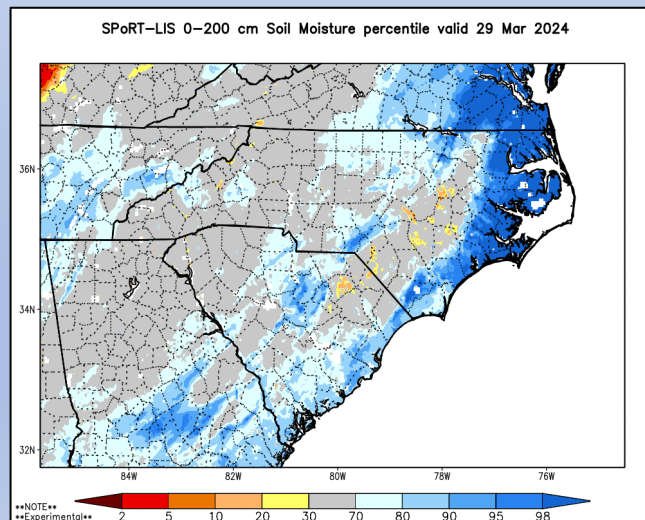
- Coastal stream flows will likely rise as the last couple day's rain makes its way through watersheds.

# SPoRT Modeled Relative Soil Dryness

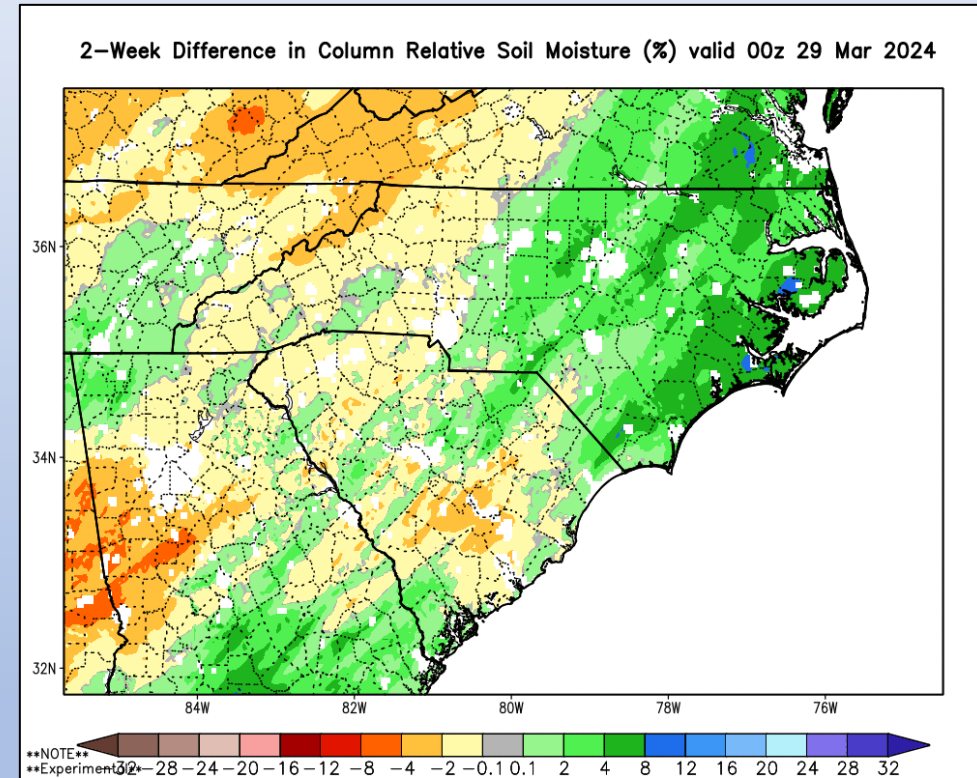
## 0-40 cm Depth



## 0-200 cm Depth



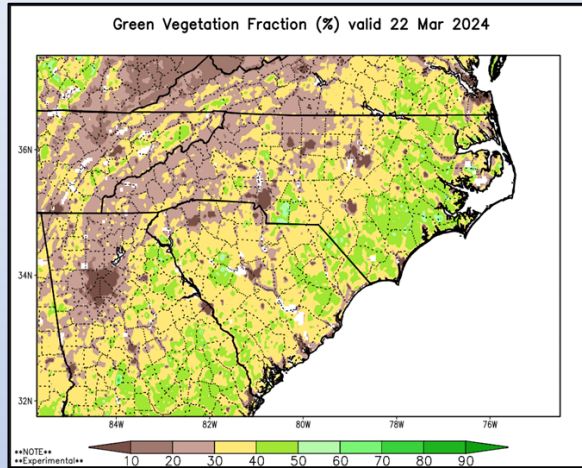
- Note areas of modeled improvement/degradation over the past couple weeks. Shallow improvement most significant.



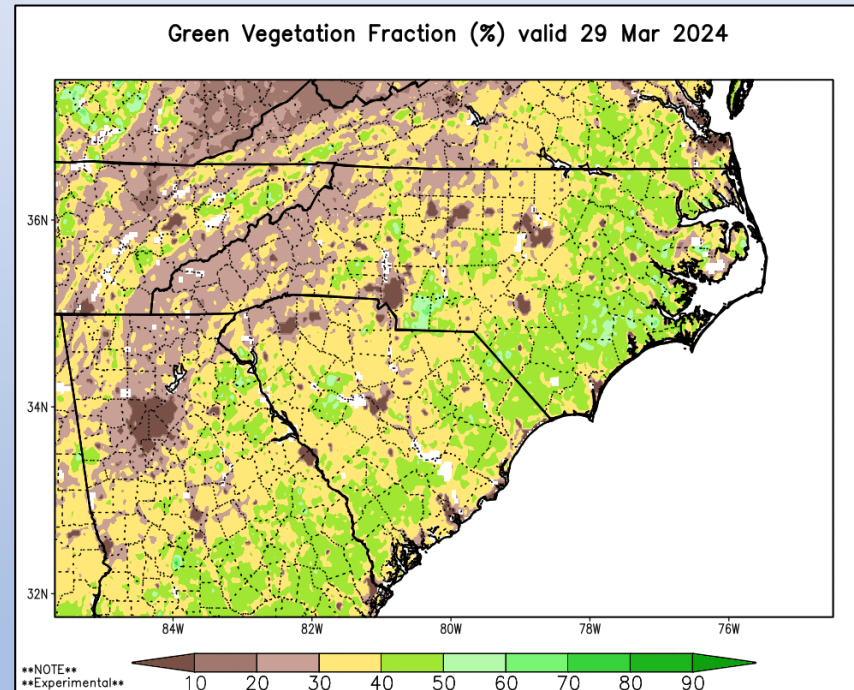


# Green Fraction & Green-Up Anomaly

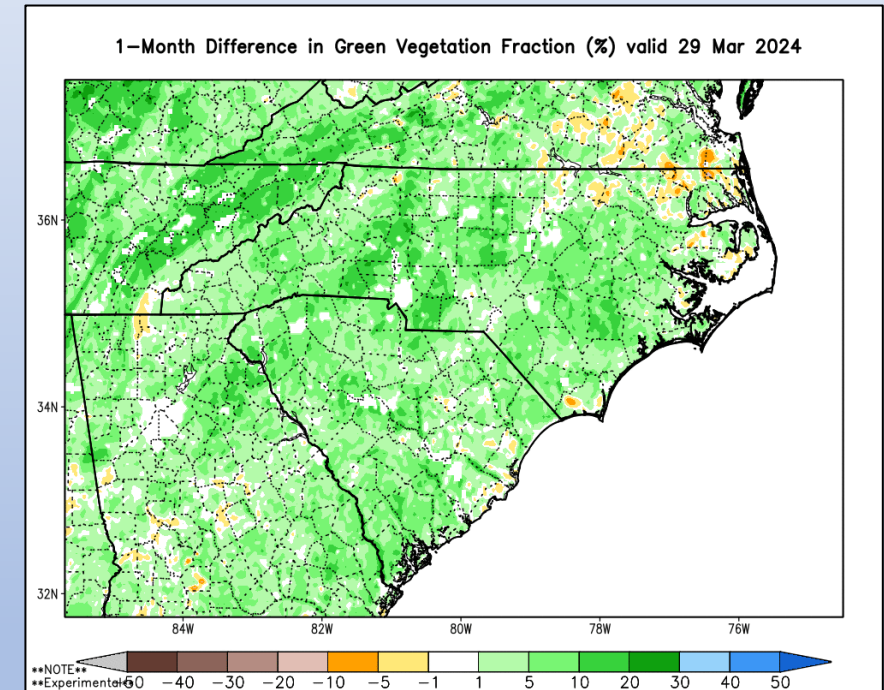
Last Week



Current



1-Month Change



Lower elevation sites remain about 1 week ahead of "normal" related to green-up processes, due to abnormally warm conditions and generally conducive rainfall.  
*\*Not Pocosin or Bay Environments\**

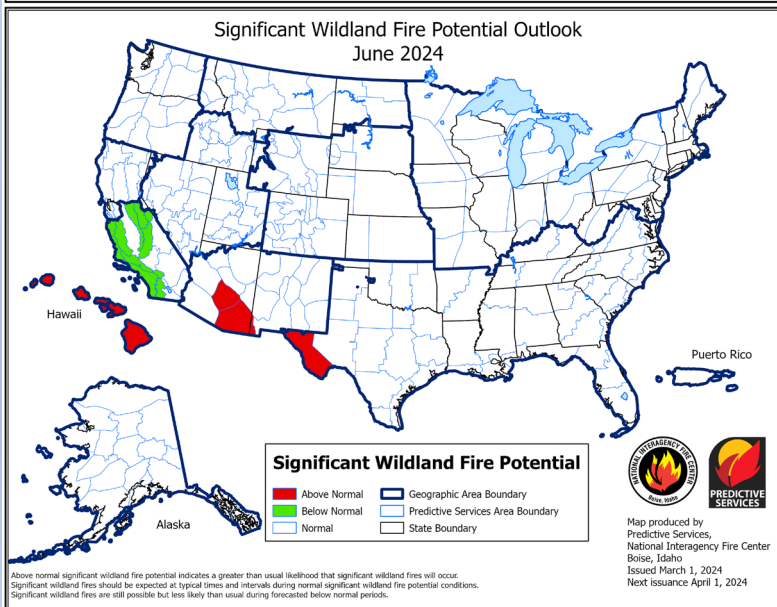
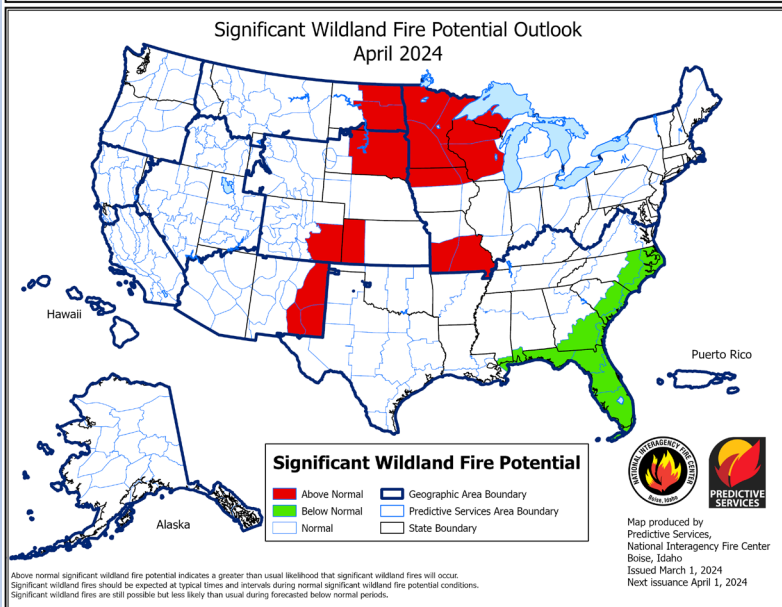
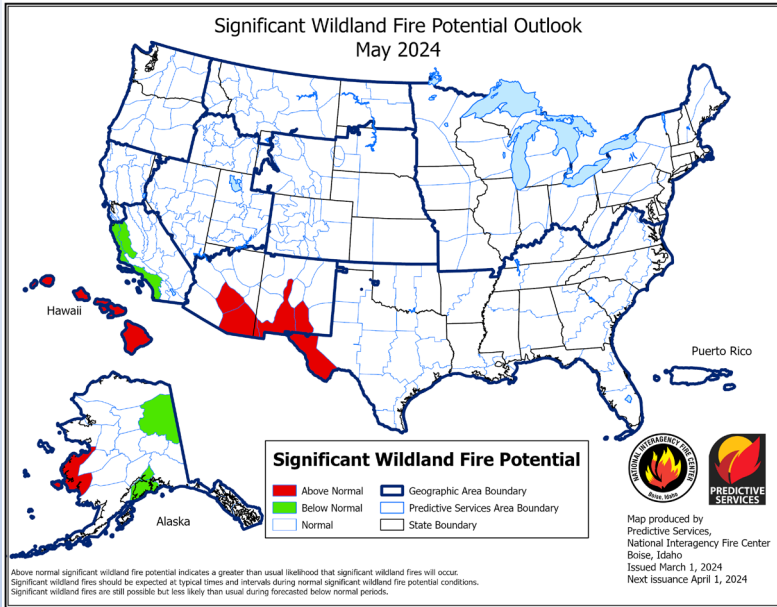
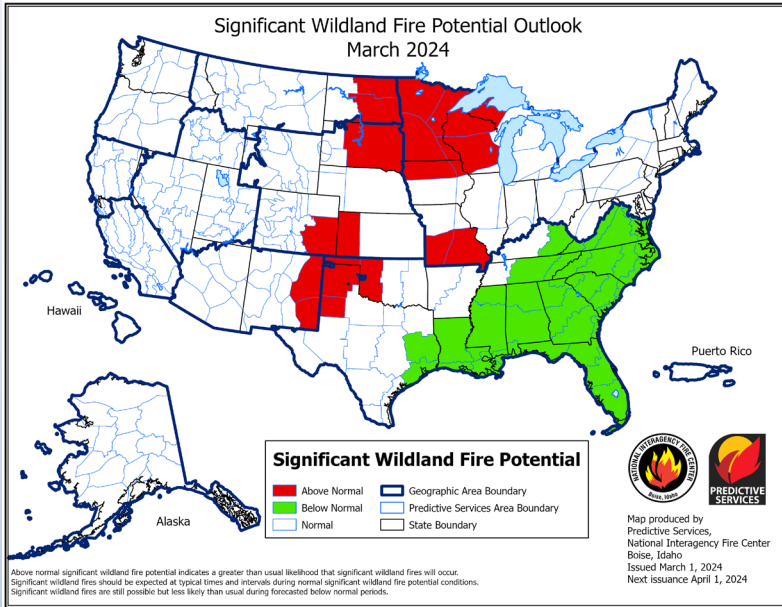
Frost & freeze events that occurred the past couple weeks seem to have slowed activity a little. However, expected warmer temps this week (night and day) + recent rains will likely accelerate green-up again for lower elevation species.

Road shoulder or yard grass greening can also be setback by rapid depletion of shallow plant available water, if rainfall deficits build in combination with arrival of Spring.

Many of the brown locations on the change map are likely agricultural areas that have been disked or treated with herbicide in preparation for spring planting.

# Significant Wildland Fire Potential Outlook:

Updated 3/1/24 – Next Update on 4/1/24



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

**\*Forecast uncertainty could easily lead to an expansion of “Normal” or “Above Normal” Fire Potential if abnormally dry conditions expand/worsen going into Spring.**

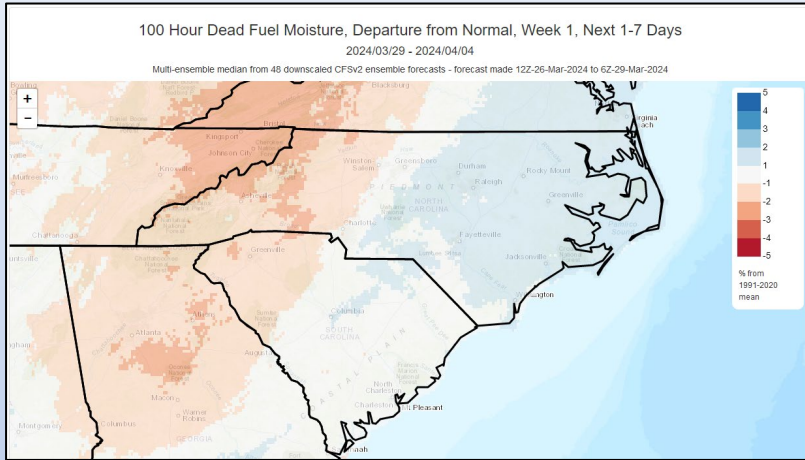
Especially for portions of the NC Coastal Plain already showing significant rainfall deficits at varied scales. Spring “Green-Up” has the potential to rapidly draw down available soil moisture.



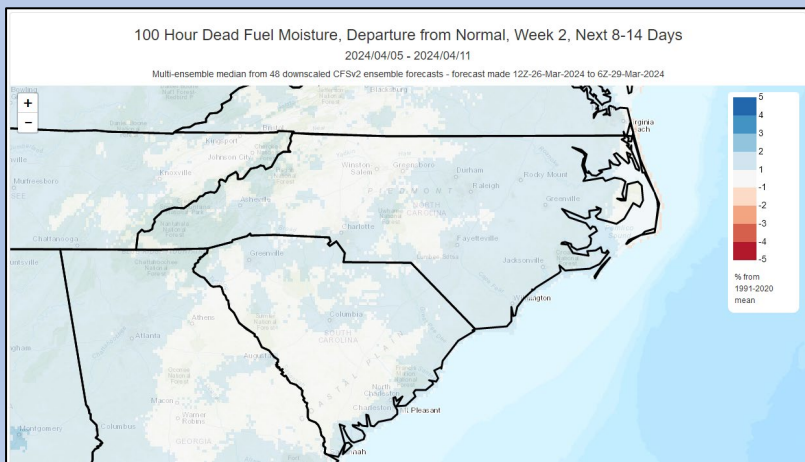
# Modeled Departure from Normal by Week: 100-hr Fuels

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

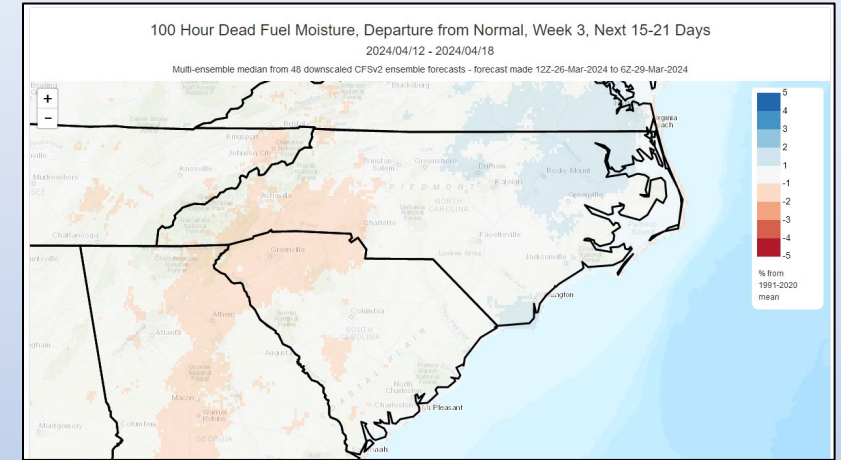
## Week-1



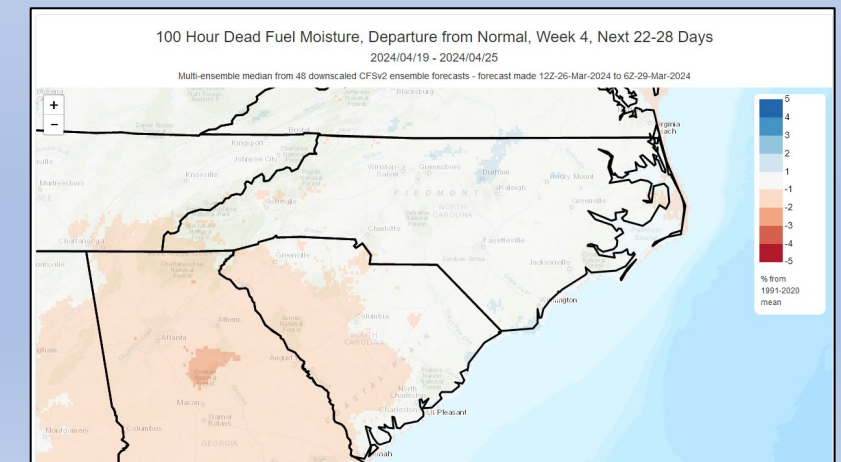
## Week-2



## Week-3



## Week-4



This output can provide insight into general drying trends and potential impacts to overall fire danger, especially prior to full green-up.

Note pronounced drying for areas that missed rain in the mountains for Week-1. Weeks 2-4 show potential for fuel moistures to be near normal to slightly drier.

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

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