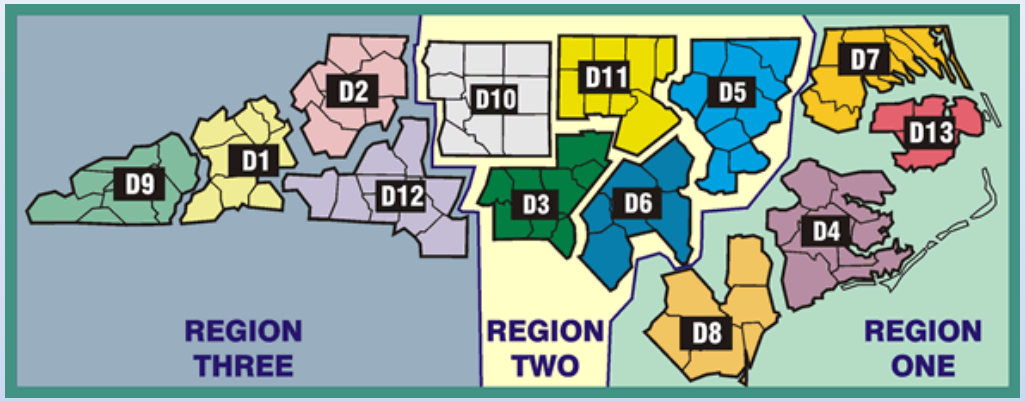


Weekly Fire Danger Assessment
NCFS - Region ONE

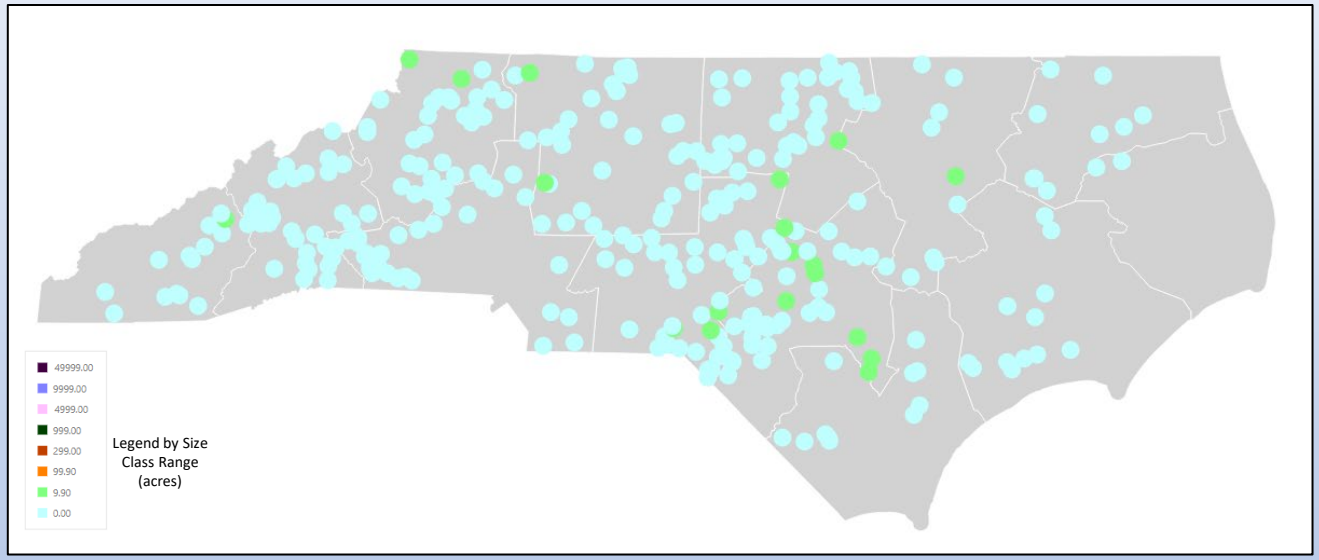
For Time Period:

Friday (3/15/243) to Thursday (3/21/24)

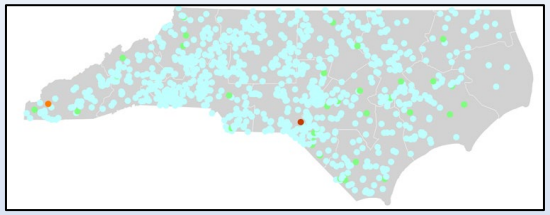
Created by: Jamie Dunbar
Fire Environment Staff Forester
NC Forest Service

Month to Date Incident Activity

fiResponse Incident Location Map (for general context, preliminary data)
Date Range: 3/1 – 3/14, 2024
Report: Business Intelligence Module, Response Trends Map



2/1 – 2/29



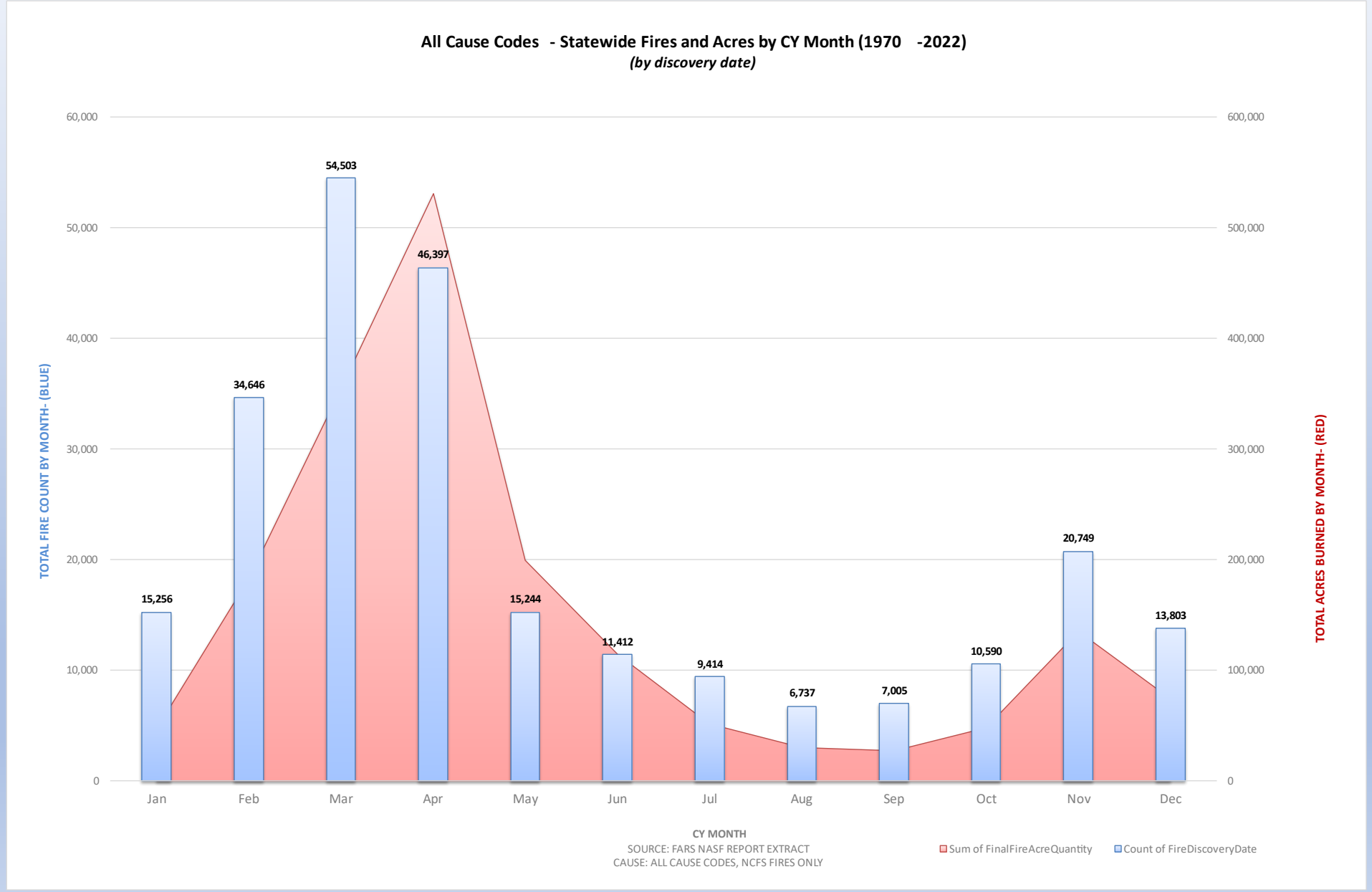
January: 10-yr avg is 305 fires for 511 acres
February: 10-yr avg is 553 fires for 1,427 acres
*March: **10-yr avg is 914 fires for 4,214 acres**
April: 10-yr avg is 655 fires for 3,219 acres
(Statewide averages, above, are based on FARS 2013-2022 Data)

Largest incidents MTD (Ending 3/14):
from fiResponse & preliminary reporting only

Discovery Date	Region	District	County	Acres
3/12/2024	Region 2	District 6	Hoke County	60.00
3/5/2024	Region 3	District 2	Alleghany County	48.00
3/12/2024	Region 2	District 3	Scotland County	45.00
3/14/2024	Region 2	District 6	Harnett County	41.63
3/12/2024	Region 2	District 5	Edgecombe County	41.60
3/14/2024	Region 2	District 6	Sampson County	30.00
3/10/2024	Region 2	District 6	Cumberland County	26.50
3/14/2024	Region 2	District 6	Harnett County	25.00
3/5/2024	Region 2	District 6	Sampson County	20.00
3/13/2024	Region 2	District 3	Richmond County	20.00

NCFS – By Region				
Monthly 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:	3/1 – 3/14, 2024			
Area	Wildfire Count	Wildfire Acres	RX Count (State & Private)	RX Acres (State & Private)
R1	39	28.1	24	1,563
R2	156	333.9	73	5,931
R3	99	145.3	22	2,549

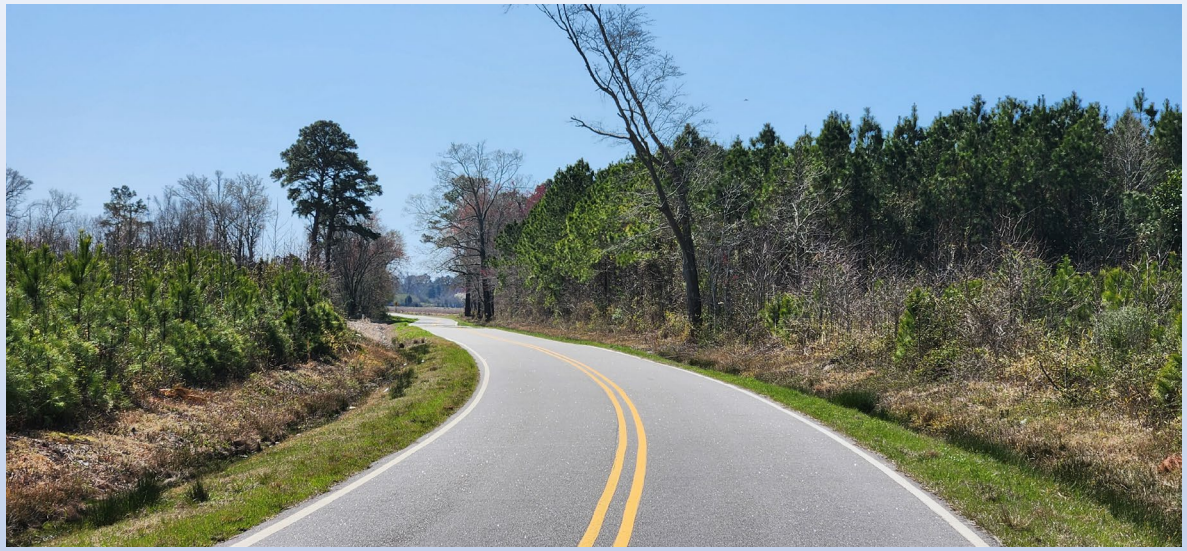
Distribution of All Fires & Acres by Month from 1970 - 2022



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

Regional Comments for this Week – R1

General District Comments:



D8:

- A lot of drying this week.
- Uplands are very available.
- Soil is still generally well hydrated, but ditches and streams are dropping fast.
- Grasses have fully greened up, resulting in a significant reduction in escaped fires.
- Most Bay ecosystems still have water in them. Generally, fires (in bays) not expected to be able to sustain themselves in wetter soils into the evening when encountering low nighttime temps and moist conditions. They can move across our wetter soils during the day, if wind sustains itself. When wind dies, fire typically dies on wet soils.

D13:

- We have had zero road shoulder fires so far, as they have greened up well.
- Very few escaped debris burns so far.
- Prescribed burns have been good this week with low humidity and good soil moisture. No smoldering issues.
- Trees are well into bud break and taking up water. Anticipate we will quickly loose the soil moisture without more rain.

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

- A large area of showers and thunderstorms ahead of a cold front this morning will gradually dissipate as it runs out of steam, but scattered clusters will survive to the Gulf Coast and East Coast. Rains being suppressed more to the south of North Carolina with this weekend's rain event.
- 10-hour fuels will remain drier than normal along portions of the East Coast today until rain chances increase late in the day; RH will be higher tonight, promoting improving conditions for Saturday, but dry air will quickly return, setting the stage for another round of accelerated drying north of the Gulf Coastal Plain that will last well into next week, especially in the Appalachians.
- Areas of the Appalachians and East Coast that miss out on rainfall today into tomorrow are likely to see 100FM fall to near critical levels next week, even as temperatures fall well below normal for several days – fire weather concerns should increase, mainly across VA, far eastern KY and NC until rain returns late next week.
- Fuel moisture is likely to increase during the week two period across the Appalachians as a significant storm system potentially produces a widespread rainfall and high elevation snow.

Updated 3/15/24 AM

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.

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

3/15/24 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	2024-03-15	1.47 10.6%	0.20 11.0%	0.00 17.2%	1.20 10.6%	15.67	28.78 90.4%	26.57 89.4%	18.30 31.0%	24.53 97.5%	94.40	93.00	60.7°F	81.7%	SW 3.3 mph	1.04 in.	5.3
Central Mountains	3	2024-03-15	0.00 8.7%	0.00 9.2%	0.00 15.5%	0.00 8.4%	16.67	30.90 93.4%	27.96 92.8%	18.77 49.8%	23.37 92.5%	112.80	106.33	62.3°F	83.7%	SE 1.3 mph	0.59 in.	6.0
Northern Highlands	2	2024-03-15	0.00 12.2%	0.00 12.6%	0.00 21.8%	0.00 11.7%	26.50	35.00 100.0%	26.55 90.9%	19.33 50.6%	23.60 96.1%	53.65	82.00	62.0°F	79.0%	SW 2.5 mph	0.22 in.	5.0
Blue Ridge Escarpment	3	2024-03-15	0.00 10.1%	0.00 10.7%	0.00 16.6%	0.00 9.8%	36.33	30.21 91.4%	26.71 88.8%	14.95 8.3%	20.62 66.0%	119.33	113.67	62.7°F	87.0%	SSW 1.7 mph	0.31 in.	3.3
Western Piedmont	3	2024-03-15	12.03 12.6%	8.03 15.9%	1.90 25.0%	3.07 11.3%	29.33	26.84 91.6%	16.55 58.2%	17.61 49.4%	23.09 94.8%	138.00	121.67	60.7°F	92.3%	WSW 3.3 mph	0.39 in.	2.3
Sandhills	3	2024-03-15	43.57 72.0%	39.50 50.3%	12.10 69.4%	9.37 86.5%	63.67	9.89 32.4%	11.98 9.1%	15.87 14.6%	22.85 94.5%	247.23	198.00	66.0°F	77.3%	WSW 8.0 mph	0.08 in.	0.7
Eastern Piedmont	4	2024-03-15	44.88 23.1%	22.95 26.7%	7.85 53.7%	15.65 20.9%	47.50	10.41 24.4%	12.17 7.7%	16.62 22.6%	23.16 95.6%	190.55	162.25	72.8°F	51.3%	W 10.0 mph	0.00 in.	0.0
Southern Coastal	7	2024-03-15	85.33 69.2%	44.23 68.9%	11.80 85.0%	35.10 72.0%	110.71	10.64 35.5%	16.66 49.3%	18.32 30.4%	24.41 95.3%	50.00	90.00	80.0°F	40.7%	SW 7.1 mph	0.00 in.	0.0
Northern Coastal	4	2024-03-15	87.60 68.3%	51.63 83.8%	13.98 89.4%	29.58 57.3%	67.00	9.35 11.2%	14.08 21.1%	17.81 38.0%	24.83 98.9%	50.00	90.00	81.3°F	39.5%	SSW 7.0 mph	0.00 in.	0.0

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

Important notes for next slide group:

A. Current ERC, KBDI, 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

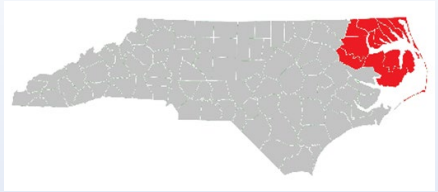
Dead fuel moisture forecast values are grouped into three categories based on historical percentiles, assessed using the FF+ All Days filter through 2021:

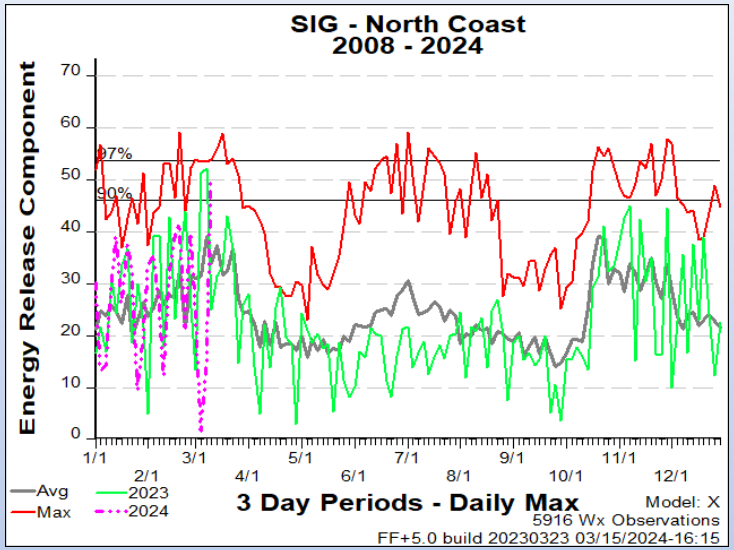
- Low to Moderate (26th to 100th percentile); shown in blue-green
- High (11th to 25th percentile); shown in yellow
- Very High to Extreme (0 to 10th percentile); shown in red and labeled as Critical

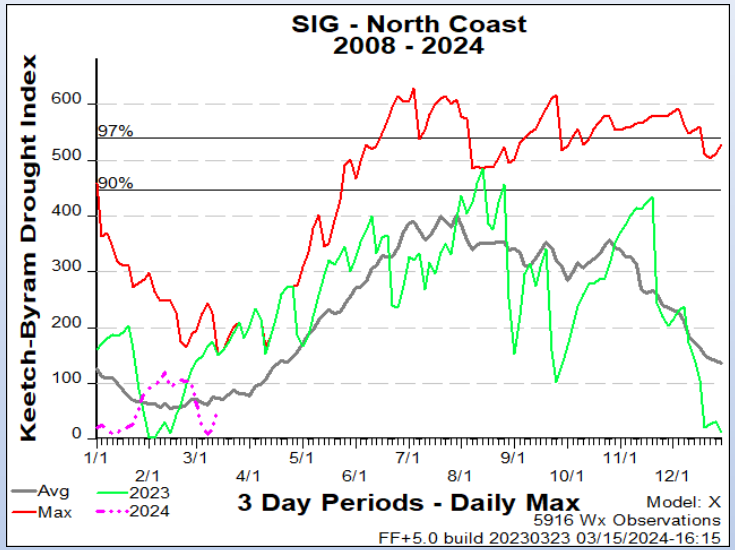
Other Notes:

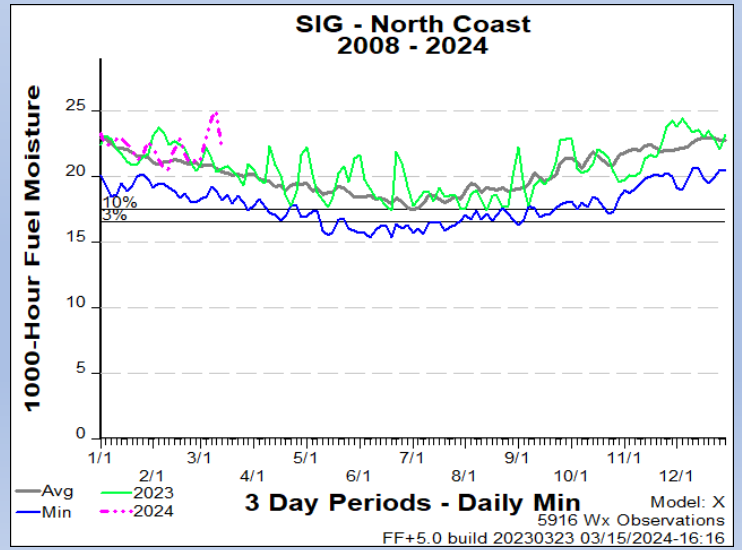
- Read the key and notes for each FDRA, included on the outlook matrix page.
- Forecasts are variable and can change significantly over a forecast cycle and across the landscape.
- This is another tool for gaining better situational awareness, and should be used for general planning purposes only.
-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

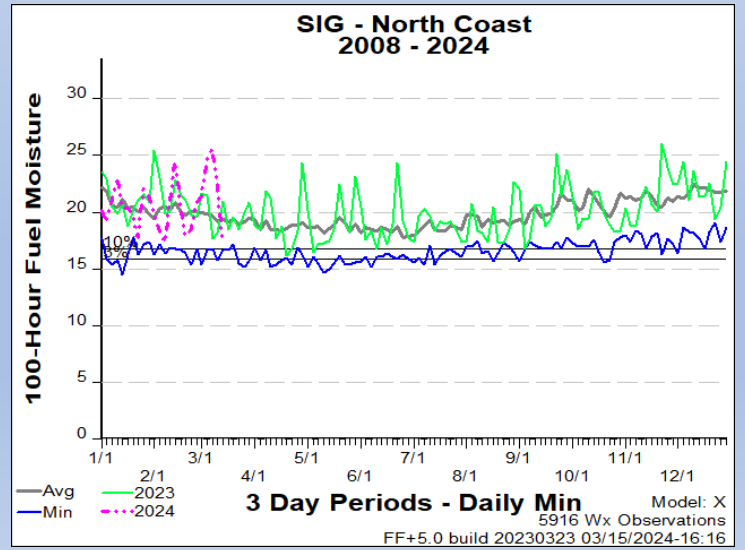
Region Specific – North Coast











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 15-Mar	SAT 16-Mar	SUN 17-Mar	MON 18-Mar	TUE 19-Mar	WED 20-Mar	THU 21-Mar
Avg. Max. Temp. (°F)	83	65	73	61	54	64	64
Avg. Min. Humidity (%)	36	53	44	42	28	29	37
Avg. 20' Wind Speed (mph)	11	6	7	7	11	9	6
Avg. Wind Direction*	SW	E	SW	SW	WNW	WSW	S
Avg. Probability of Precip. (%)	55	10	21	12	1	1	2
Days Since a Wetting Rain**	5.3	4.3	5.3				
Forecast ERC (Fuel Model X)	48.7	29.6	27.5	37.6	42.7	43.0	35.6
Forecast BI (Fuel Model X)	130.5	58.7	79.4	85.2	116.5	103.9	63.8
Forecast IC (Fuel Model X)	19.2	4.5	6.3	7.8	11.0	10.9	5.8
Forecast 100-Hr. FMC	17.8	17.1	17.5	17.7	17.4	16.8	16.3
Forecast 1000-Hr. FMC	24.8	24.6	24.3	24.0	23.8	23.6	23.4
KBDI	50.8						

Data Source:

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

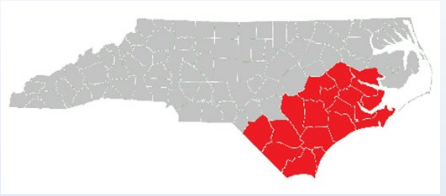
Values in the table above are averages from 4 stations in this FDRA:

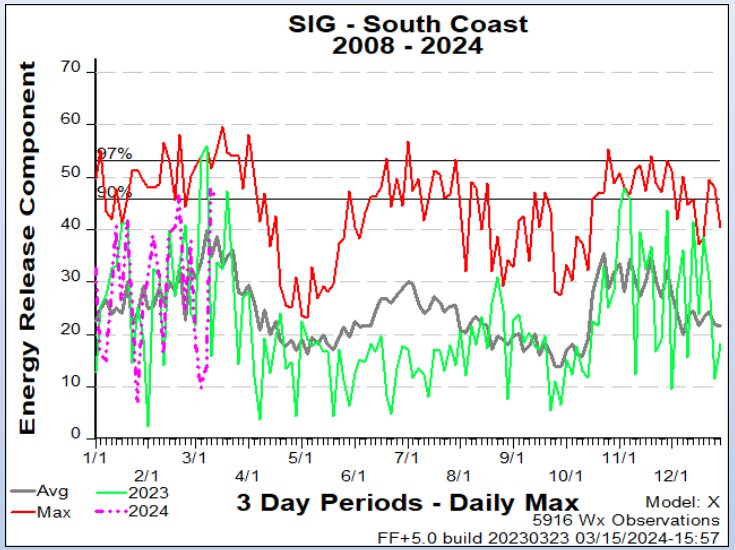
- **Elizabeth City** (311503)
- **Greens Cross** (313001)
- **Pocosin Lakes** (315201)
- **Fairfield** (317901)

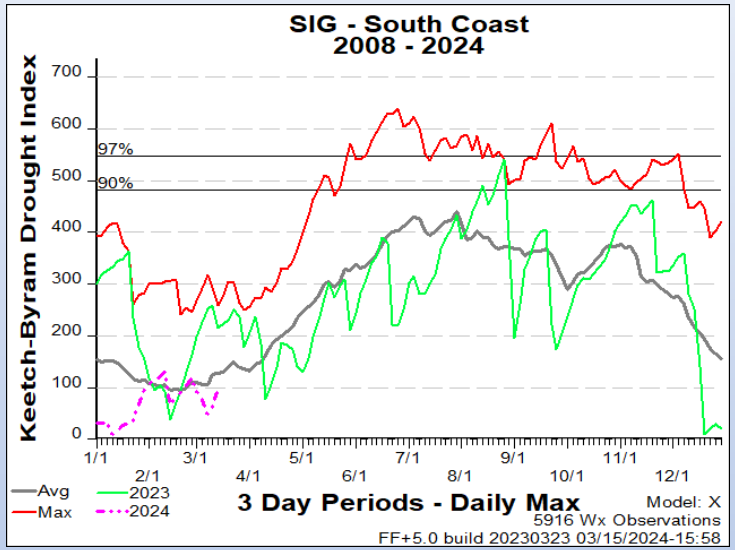
KEY	Low to Moderate Burning Conditions	Burning Conditions Can be High CAUTION	Burning Conditions Can be Critical WATCH OUT!
Avg. Max. Temp.	Less than 45°F	Between 45°F and 55°F	Greater than 55°F
Avg. Min. Humidity	Greater than 40%	Between 35% and 40%	Less than 35%
Avg. 20' Wind Speed	Less than 10 mph	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

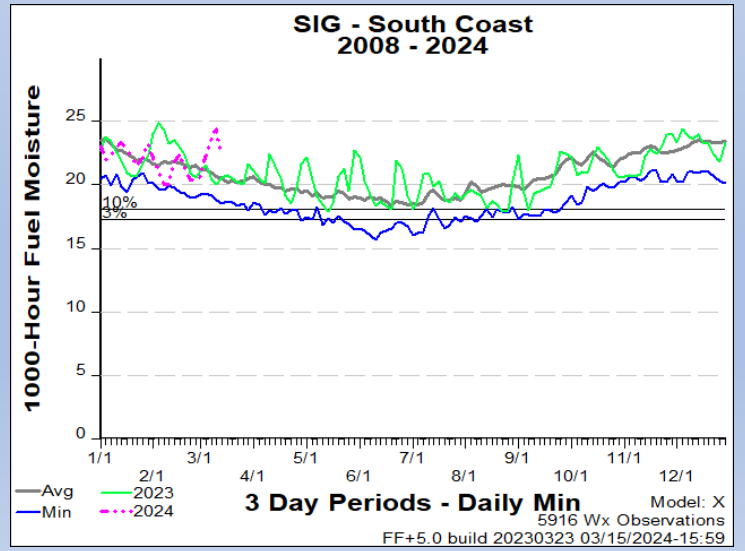
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

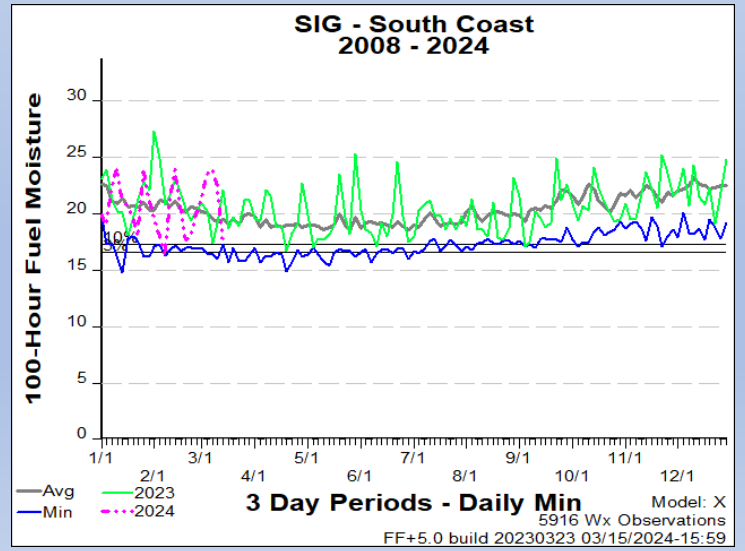
Region Specific – South Coast











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 15-Mar	SAT 16-Mar	SUN 17-Mar	MON 18-Mar	TUE 19-Mar	WED 20-Mar	THU 21-Mar
Avg. Max. Temp. (°F)	82	70	76	65	56	67	68
Avg. Min. Humidity (%)	42	55	45	36	27	32	36
Avg. 20' Wind Speed (mph)	10	5	5	9	12	9	7
Avg. Wind Direction*	SW	SE	SW	WNW	WNW	WSW	SE
Avg. Probability of Precip. (%)	52	18	29	10	0	1	1
Days Since a Wetting Rain**	6.0	3.4	4.4				
Forecast ERC (Fuel Model X)	45.4	29.5	27.3	39.2	49.4	49.2	44.5
Forecast BI (Fuel Model X)	120.5	55.4	72.7	93.7	123.8	123.5	93.3
Forecast IC (Fuel Model X)	17.7	4.5	5.9	9.6	14.4	15.2	10.1
Forecast 100-Hr. FMC	17.9	17.3	17.7	17.9	17.6	16.7	16.0
Forecast 1000-Hr. FMC	24.4	24.1	23.8	23.5	23.3	23.2	22.9
KBDI	94.3						

Data Source:

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

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

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

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

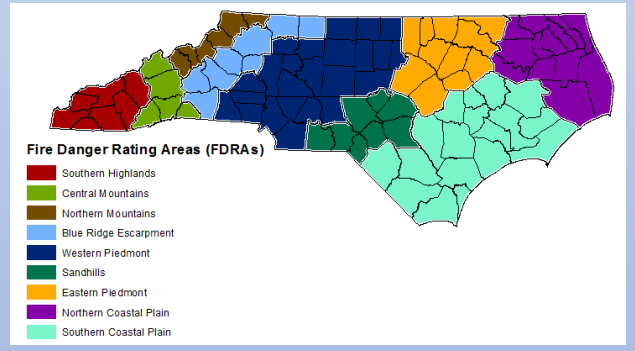
Other factors to consider when determining fire danger: **sky conditions**, **precipitation amount**, **number of days since rain**, and **season**

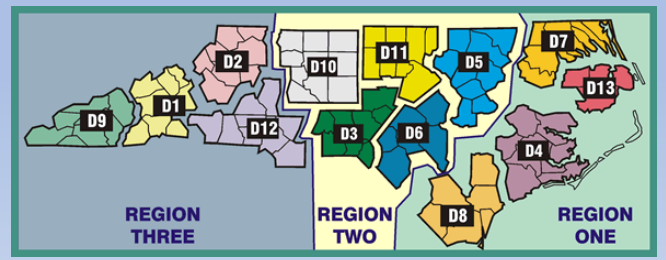
Outlook Summary Tables – Organized by Region –

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 NFDRS forecasts projected through seven days. Forecasts can change significantly along with actual precip amount & duration. Local factors should also be considered.





Output from NFDRS forecast generated on 3/14/24.

Date	Day of Week	FDRA Matrix Summary - NCFS Region 1	
		North Coast	South Coast
15-Mar	Fri	Critical	High +
16-Mar	Sat	Low/Mod	Low/Mod
17-Mar	Sun	Low/Mod	High
18-Mar	Mon	Low/Mod	High
19-Mar	Tues	High	Critical
20-Mar	Wed	High	Critical
21-Mar	Thurs	Low/Mod	High+

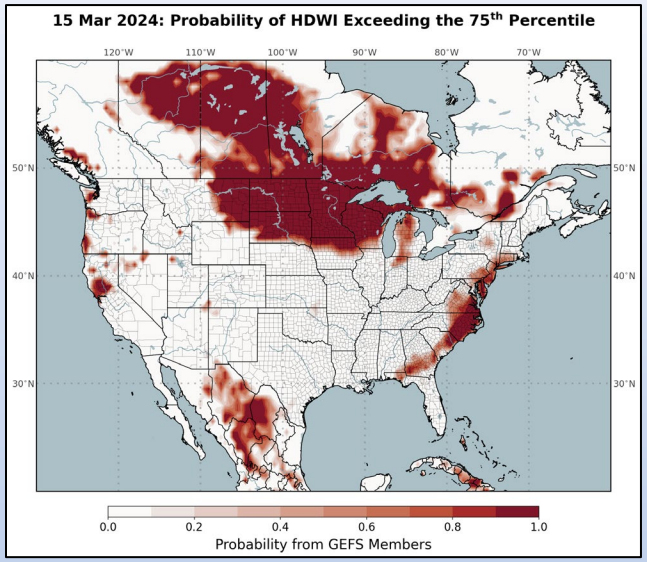
Date	Day of Week	FDRA Matrix Summary - NCFS Region 2				
		Blue Ridge Escarp	Western Piedmont	Eastern Piedmont	Sandhills	South Coast
15-Mar	Fri	Low/Mod	High	Low/Mod +	High +	High +
16-Mar	Sat	Low/Mod	Low/Mod +	Low/Mod +	Low/Mod	Low/Mod
17-Mar	Sun	Low/Mod +	Low/Mod +	Low/Mod	High	High
18-Mar	Mon	High	High	High	High +	High
19-Mar	Tues	Critical	Critical	High	High +	Critical
20-Mar	Wed	High	Critical	High	Critical	Critical
21-Mar	Thurs	High	High	Low/Mod +	High	High+

Date	Day of Week	FDRA Matrix Summary - NCFS Region 3				
		Southern Highlands	Central Mountains	Northern Highlands	Blue Ridge Escarp	Western Piedmont
15-Mar	Fri	Low/Mod	Low/Mod	High	Low/Mod	High
16-Mar	Sat	Low/Mod	Low/Mod	High	Low/Mod	Low/Mod +
17-Mar	Sun	Low/Mod	Low/Mod	High +	Low/Mod +	Low/Mod +
18-Mar	Mon	Low/Mod +	Low/Mod +	High	High	High
19-Mar	Tues	High	High	Critical -	Critical	Critical
20-Mar	Wed	High +	Critical	High	High	Critical
21-Mar	Thurs	High	High	High	High	High

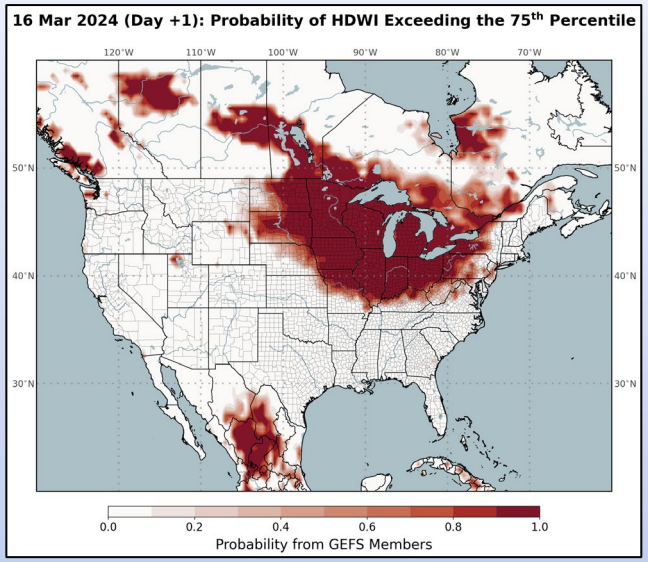
Statewide Slides

Hot-Dry-Windy Index (HDW)

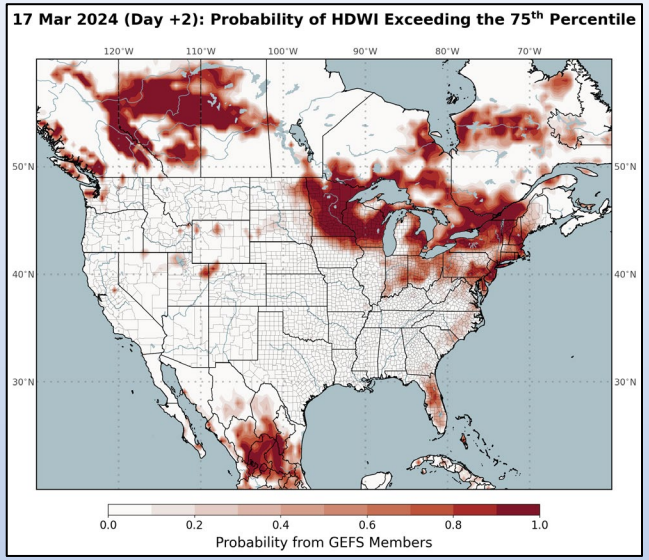
Friday > 75th Percentile



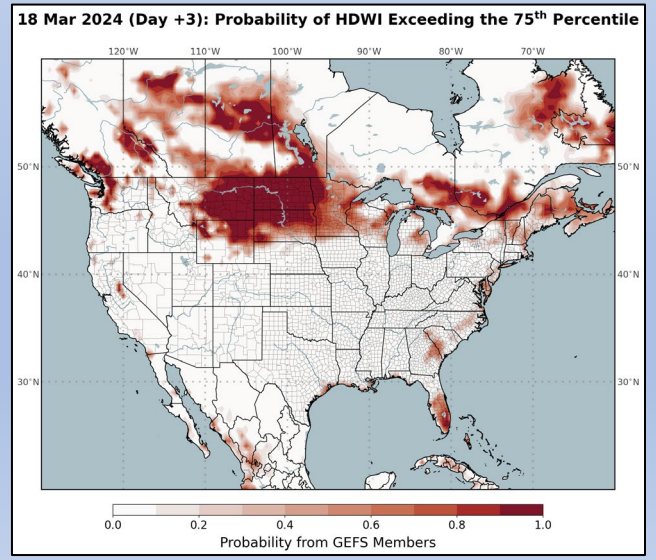
Saturday > 75th Percentile



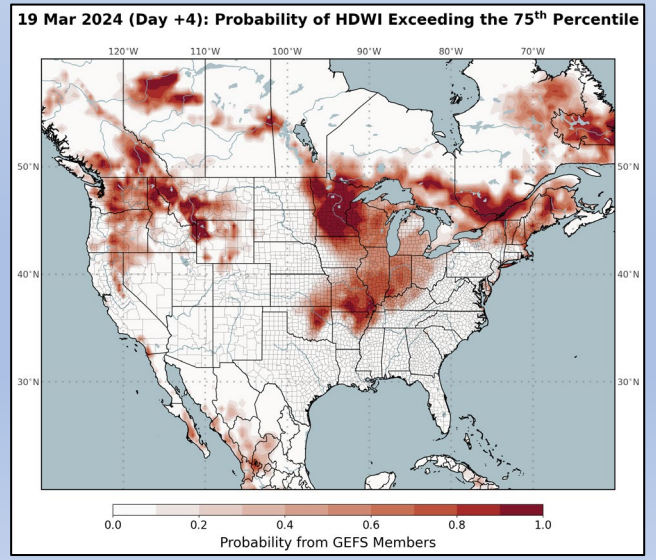
Sunday > 75th Percentile



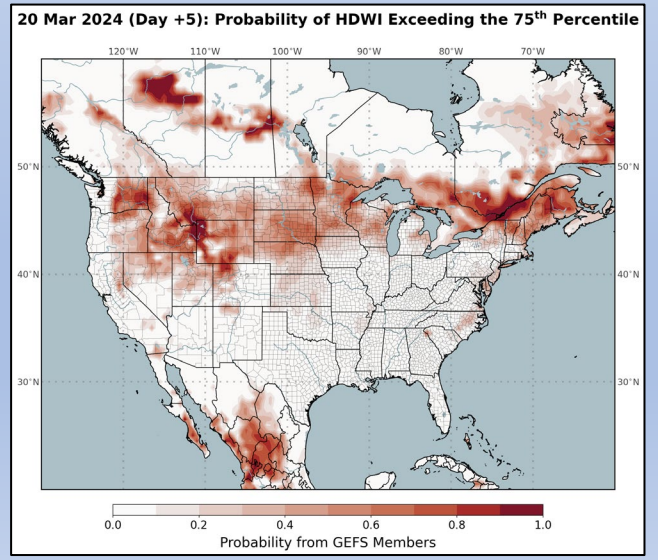
Monday > 75th Percentile



Tuesday > 75th Percentile



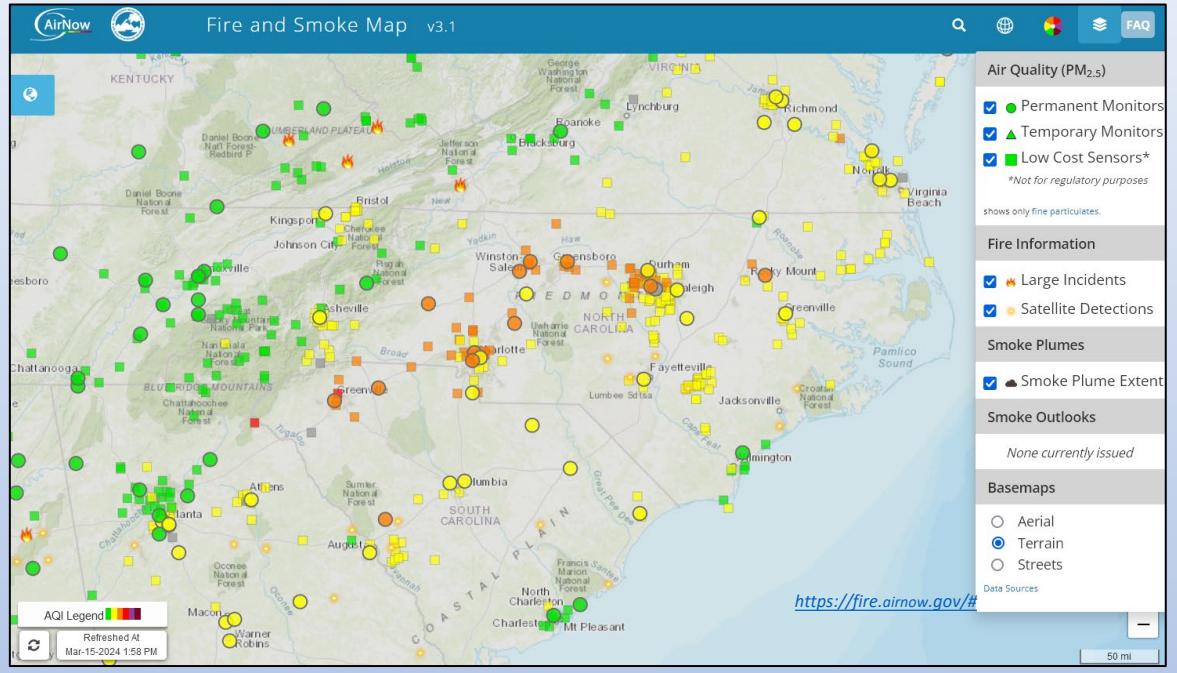
Wednesday > 75th Percentile

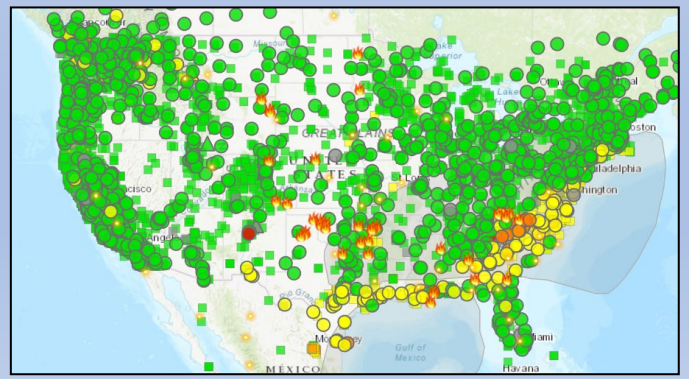


- Another visualization tool to pick up on broader weather, but with *limitations
- Only uses Max VPD (atmospheric moisture & temp) & Max Wind Speed to generate outputs
- Coarse Resolution - 0.5 Degree Grid
- No Account of Local Fuel Conditions and Topo

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

Air Quality Notes





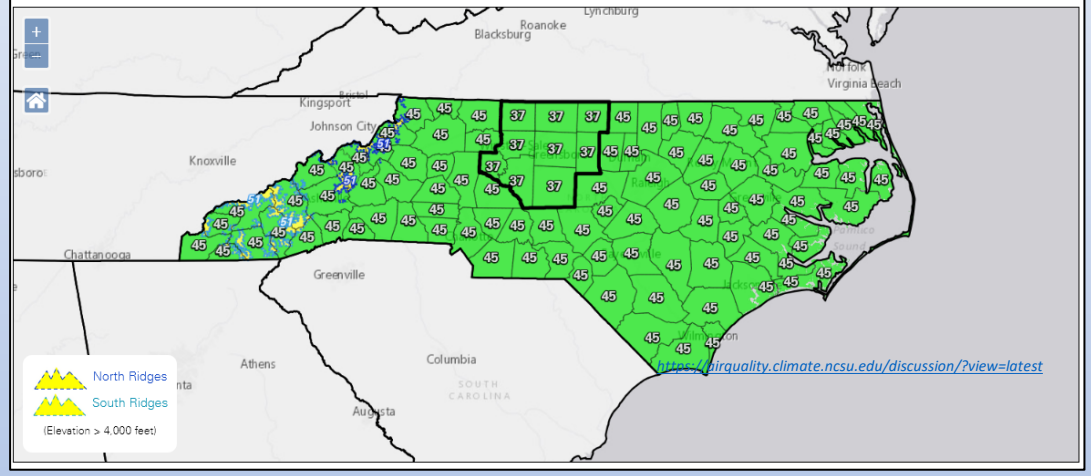
Extended Air Quality Outlook

The forecast Air Quality Index value for each pollutant represents the highest value expected within each county, so some areas and monitors may see lower values. We use the best information and techniques available to ensure the quality and accuracy of the forecasts we provide to the public. Note that ranges do *not* include the nine-county Triad region, which is covered by the Forsyth County Office of Environmental Assistance and Protection.

Forecast Day	AQI Range	Category Range	Download KML
Friday (Mar 15)	60 to 80	Yellow	download
Saturday (Mar 16)	45 to 51	Green to Yellow	download
Sunday (Mar 17)	45 to 50	Green	download
Monday (Mar 18)	40	Green	download

Maximum Air Quality Index for Mar 16, 2024

0 51 101 151 201 301



NCDAQ Previous Day (PM) Discussion

General Forecast Discussion

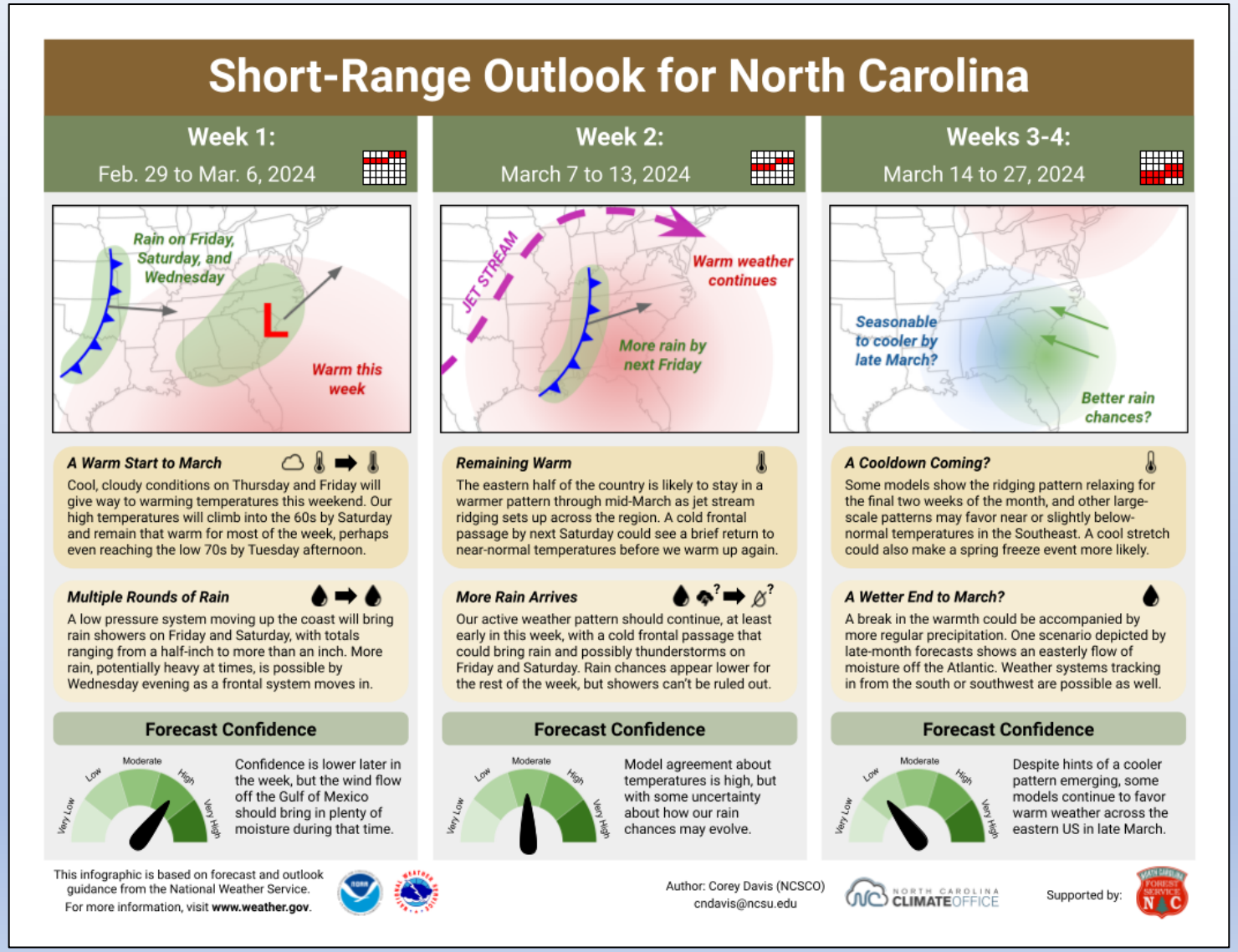
A weak frontal boundary will drop down from the north on Saturday, helping to disperse some of the accumulated smoke and deliver cleaner air to the region. Fine particulates and ozone concentrations in the mid Code Green range are expected on Saturday.

Outlook

This boundary will stall over the Carolinas on Sunday before winds shift SSW again ahead of another approaching front. Fine particulate values may rebound slightly on Sunday, but hold in the mid Code Green range. On Monday, a stronger cold front will sweep through from NW to SE, with clean, cooler air building in. Fine particulates and ozone should be Code Green through Monday.

State Climate Office: Short-Range Monthly Outlook for NC

Released 2/29/24 & Location: https://climate.ncsu.edu/fire/outlooks/

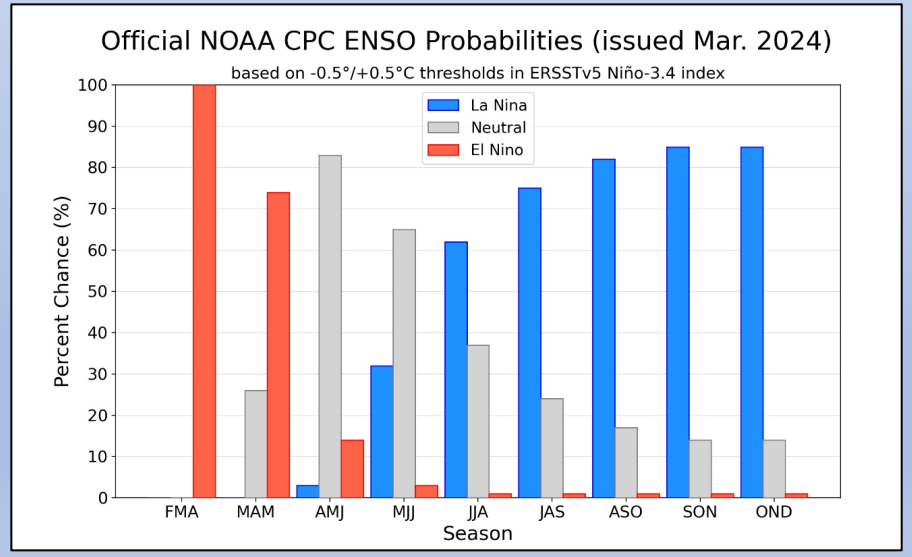


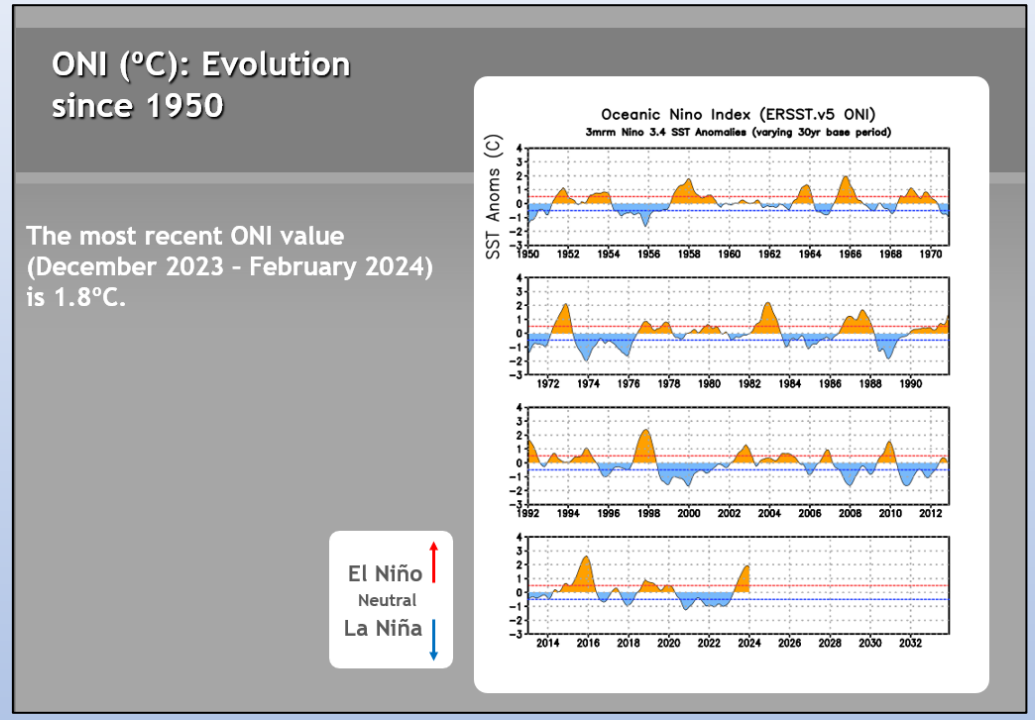
ENSO Notes from the CPC (3/14/24 Update)

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 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.





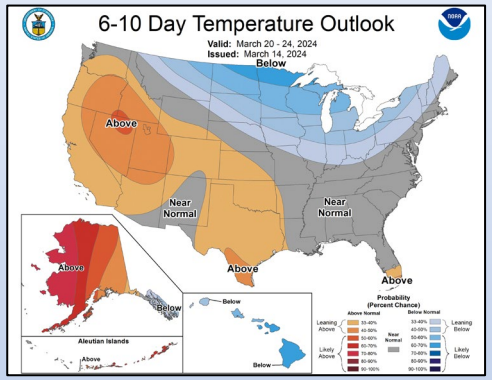
From the most recent CPC Diagnostic Discussion (ENSO Diagnostics Discussion):

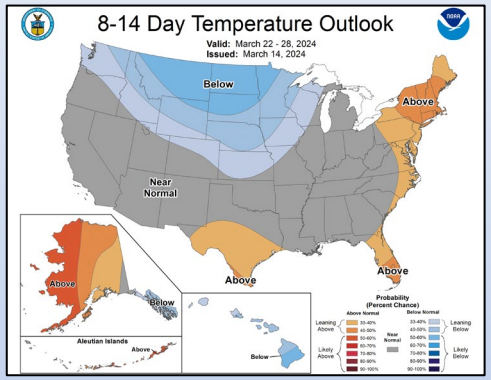
[The most recent IRI plume indicates a transition to ENSO-neutral during spring 2024, with La Niña potentially developing during summer 2024 [Fig. 6]. While different types of models suggest La Niña will develop, the forecast team favors the dynamical model guidance, which is slightly more accurate for 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]).]

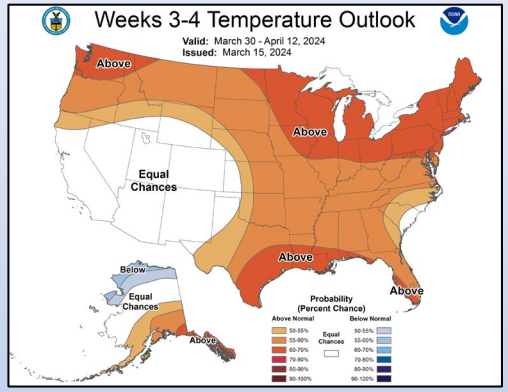
Slide Source: *https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.ppt*

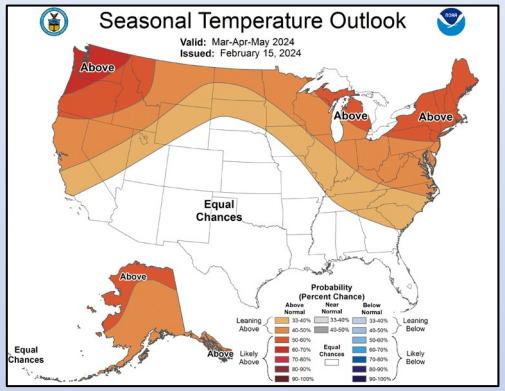
CPC Temp & Precip Outlook

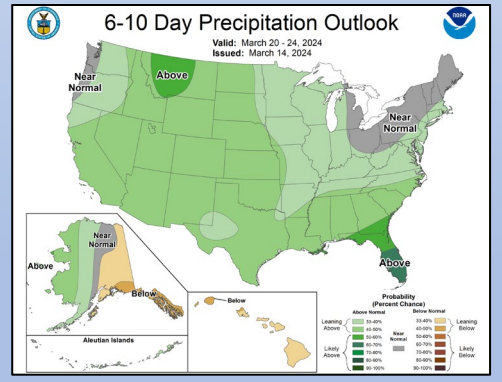
6-10 Day, 8-14 Day, Weeks 3-4, Seasonal

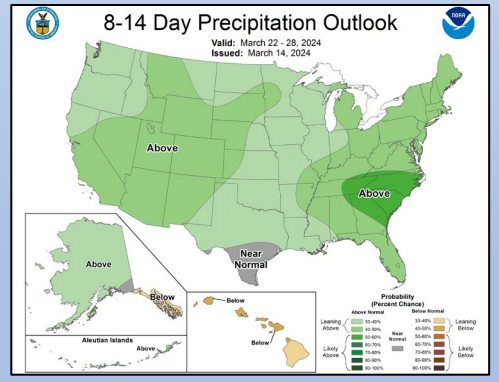


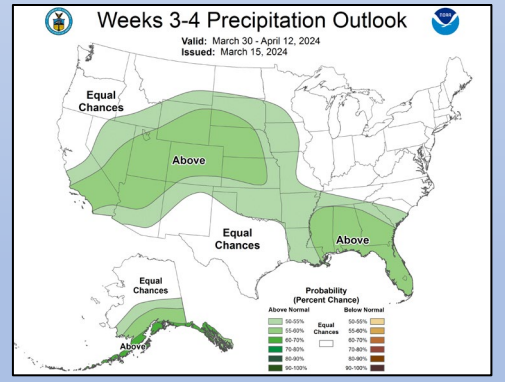


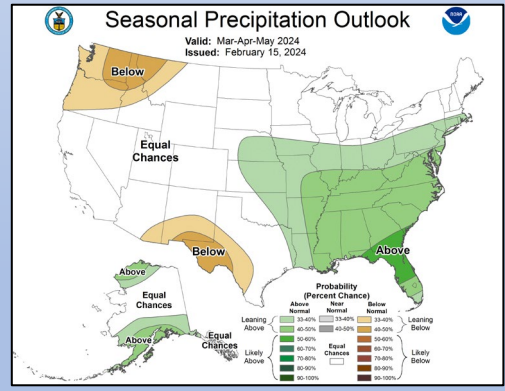








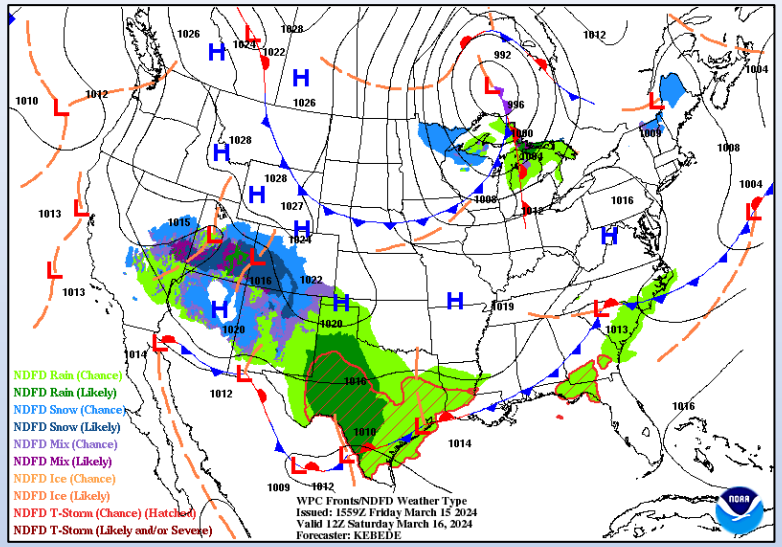




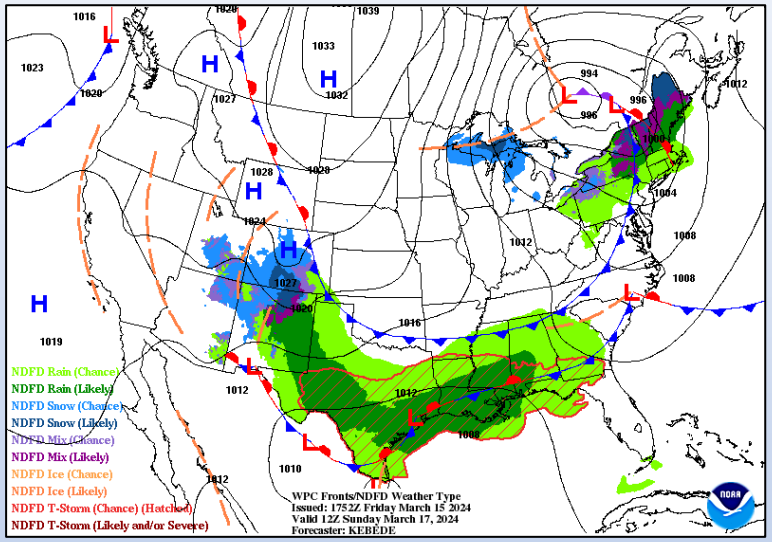
Source: https://www.cpc.ncep.noaa.gov/

WPC Forecasted Surface Fronts & Sea-Level Pressures

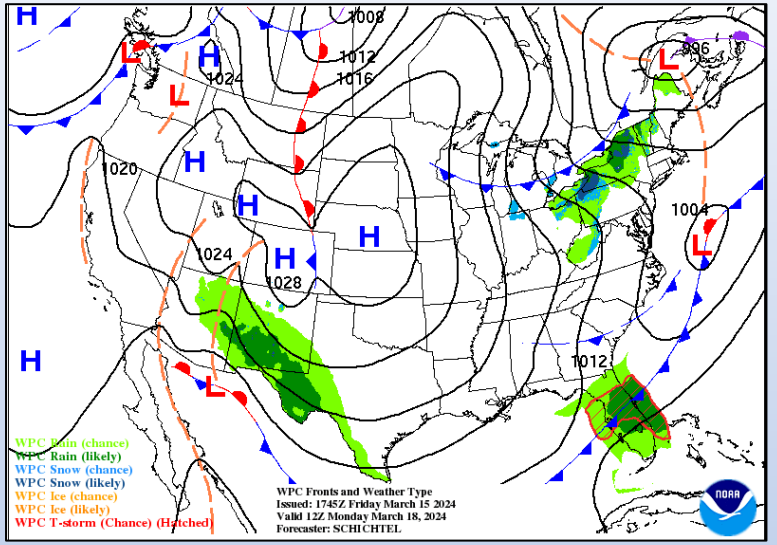
Saturday – 800 am



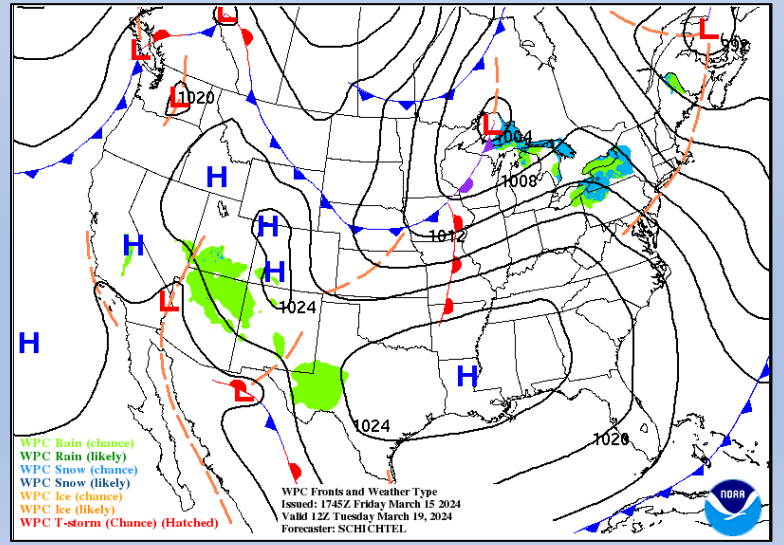
Sunday - 800 am



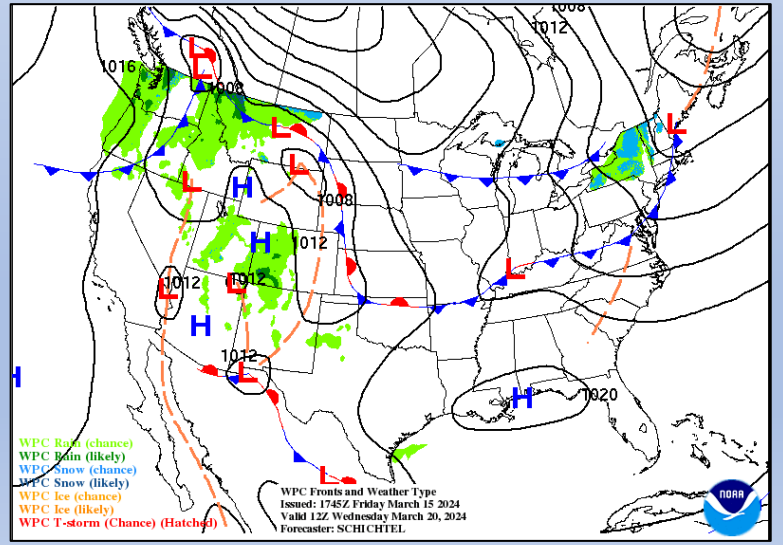
Monday - 800 am



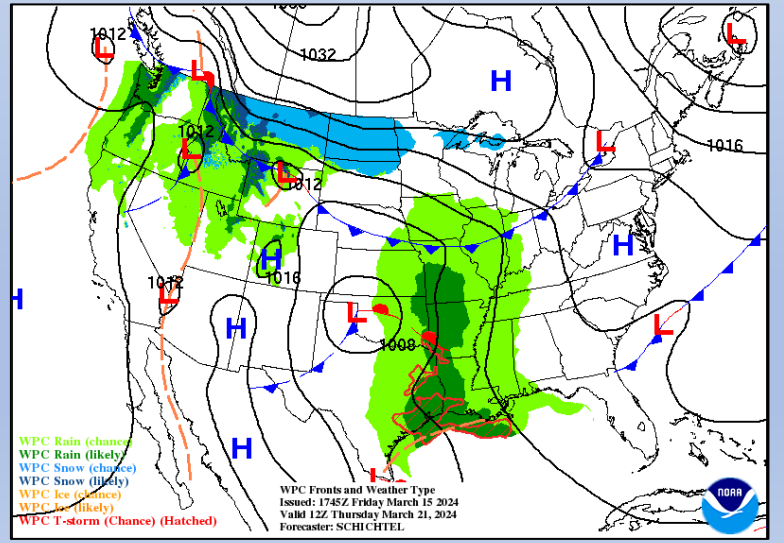
Tuesday - 800 am



Wednesday - 800 am



Thursday - 800 am

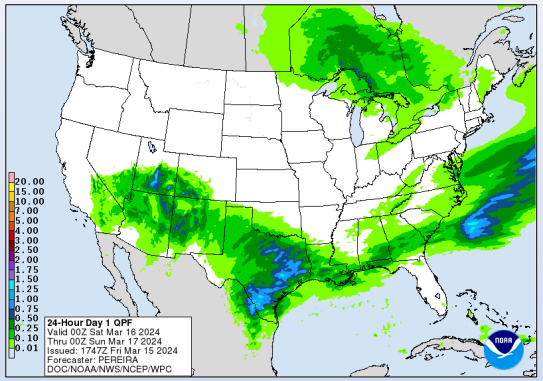


Location: https://www.wpc.ncep.noaa.gov/#

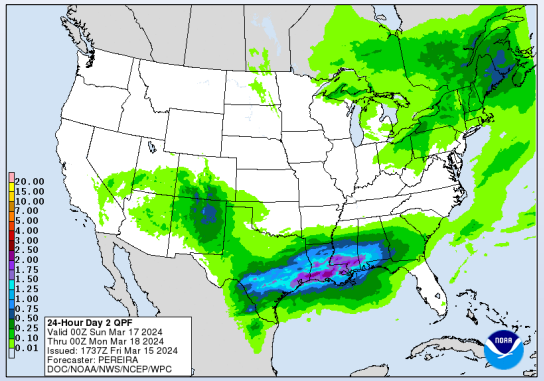
Quantitative Precipitation Forecast, 7-Day

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

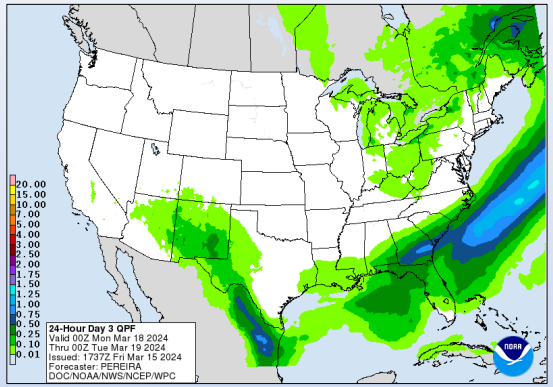
Day - 1



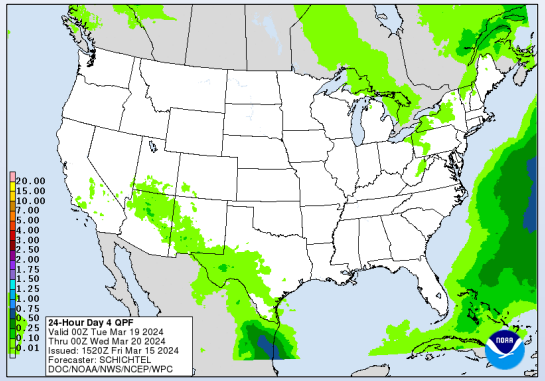
Day - 2



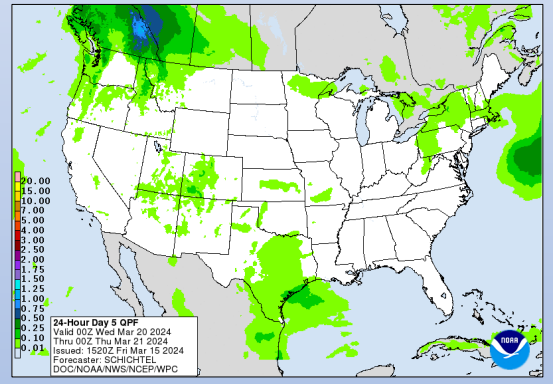
Day - 3



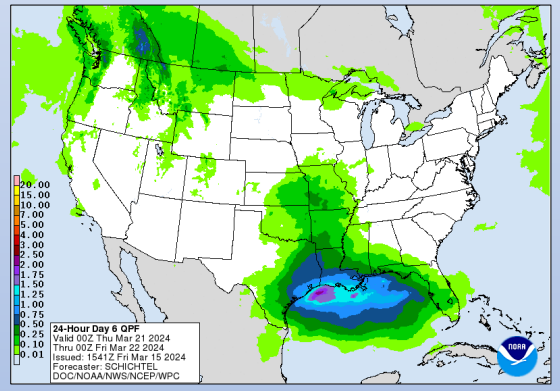
Day - 4



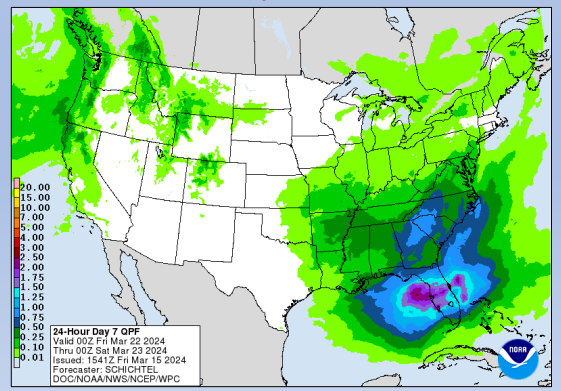
Day - 5



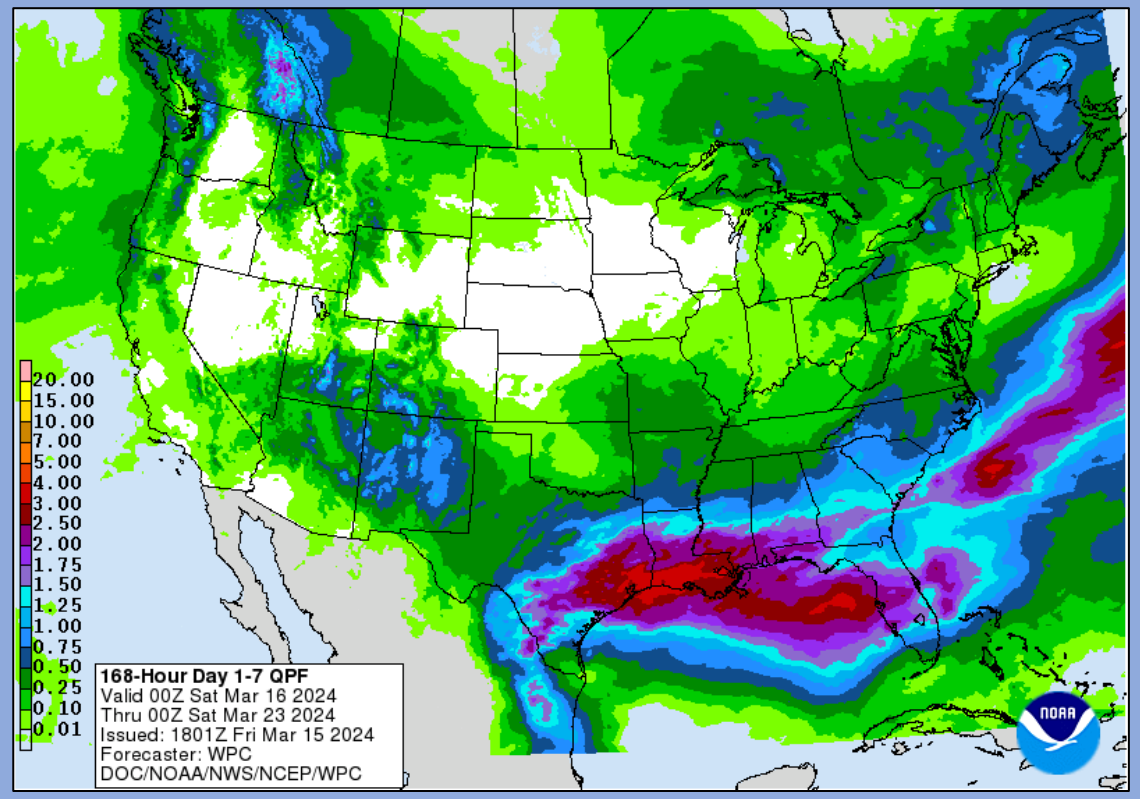
Day - 6



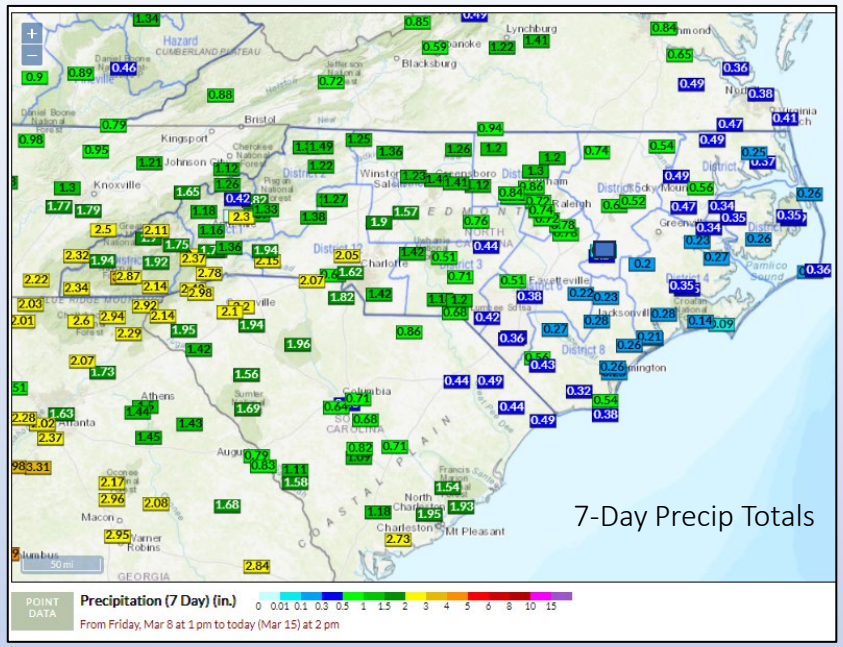
Day - 7

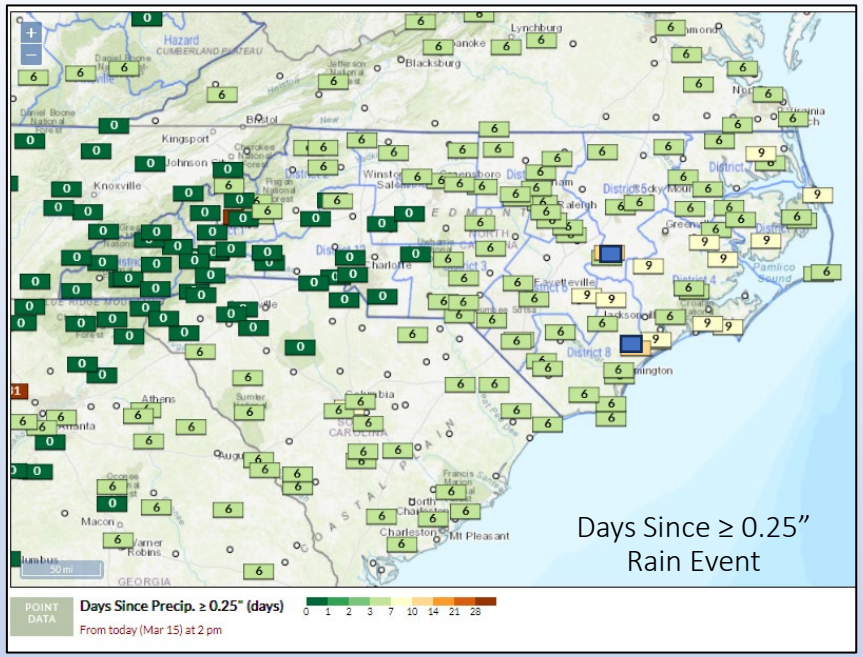


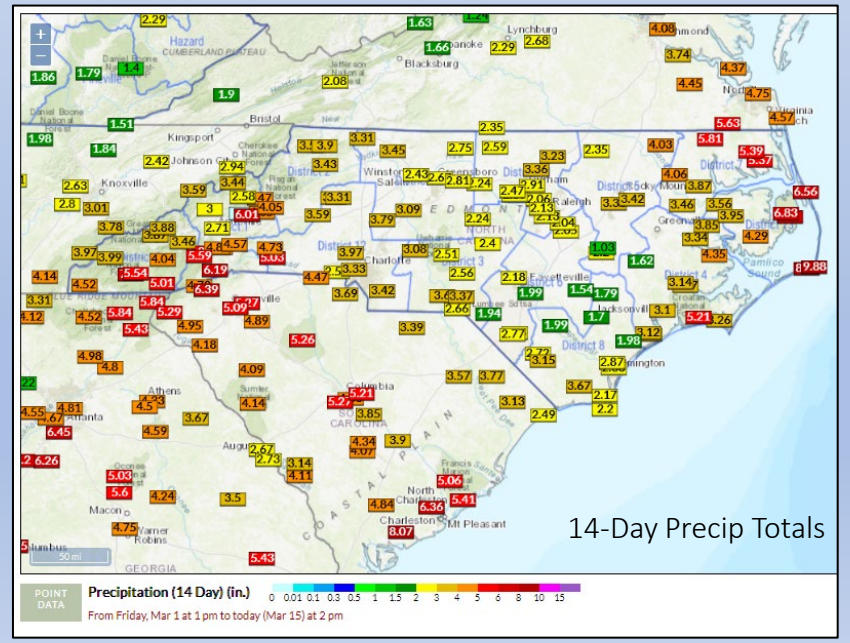
Important to note these values are subject to **significant change as weather system modeled tracks adjust farther out in time.*

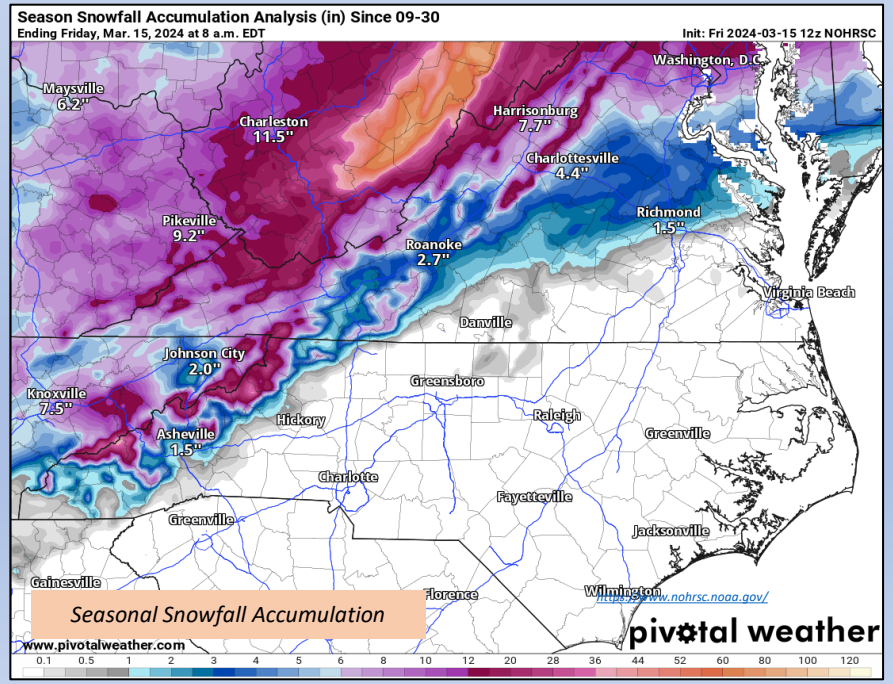


Observed Precipitation



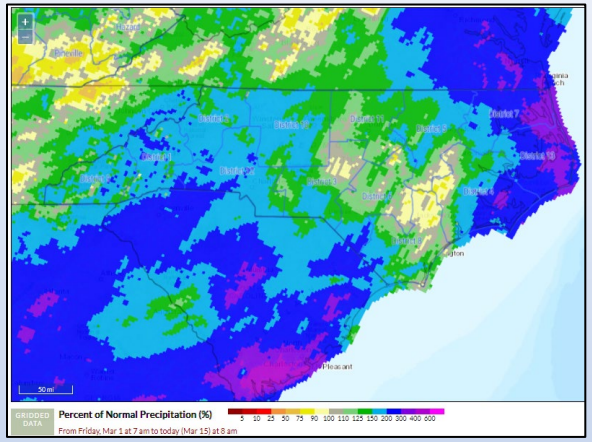




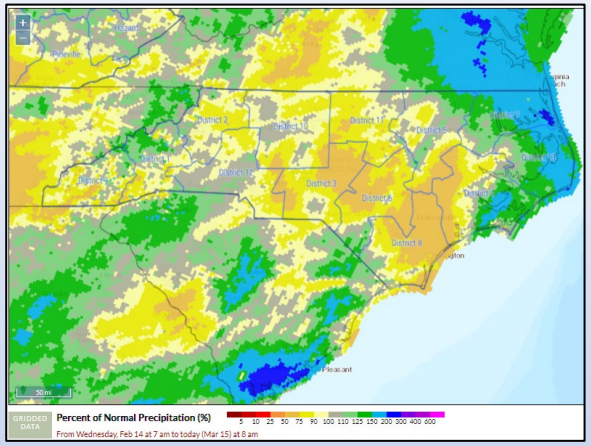


Percent of Normal Precip & SPI, *FWIP* *(Ending 0800 3/15)*

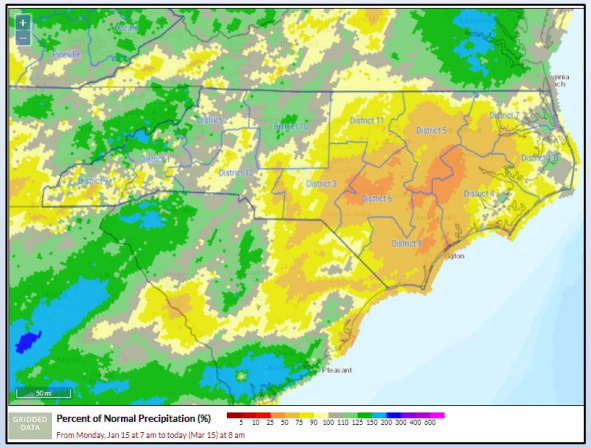
14-Day % of Normal



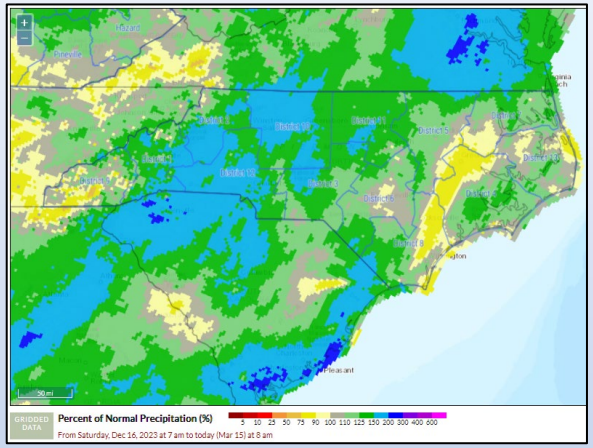
30-Day % of Normal



60-Day % of Normal



90-Day % of Normal



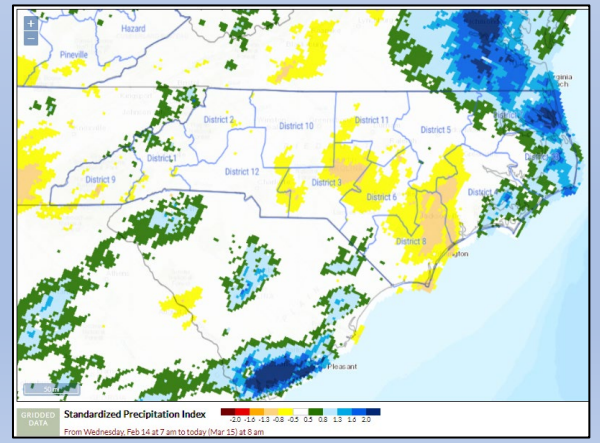
PNP: Generally, Above Normal at 14-day Scale

Driest areas at ~55% of normal at 1-Month scale.

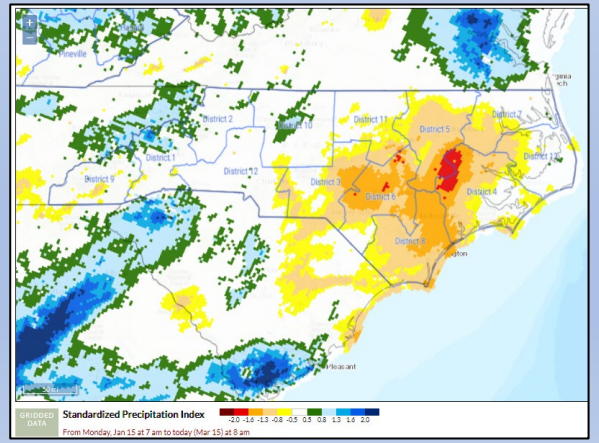
Driest areas at ~40-50% of normal at 2-Month scale.

Driest areas ~ 80% of normal at 3-Month scale.

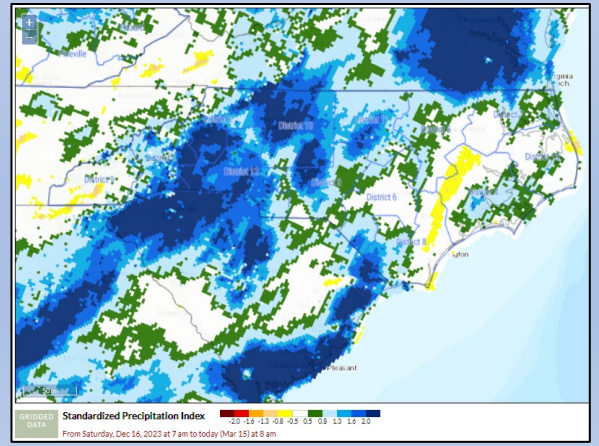
30-Day SPI



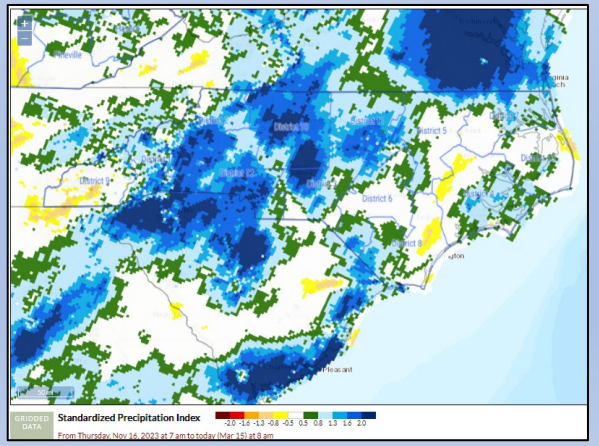
60-Day SPI



90-Day SPI



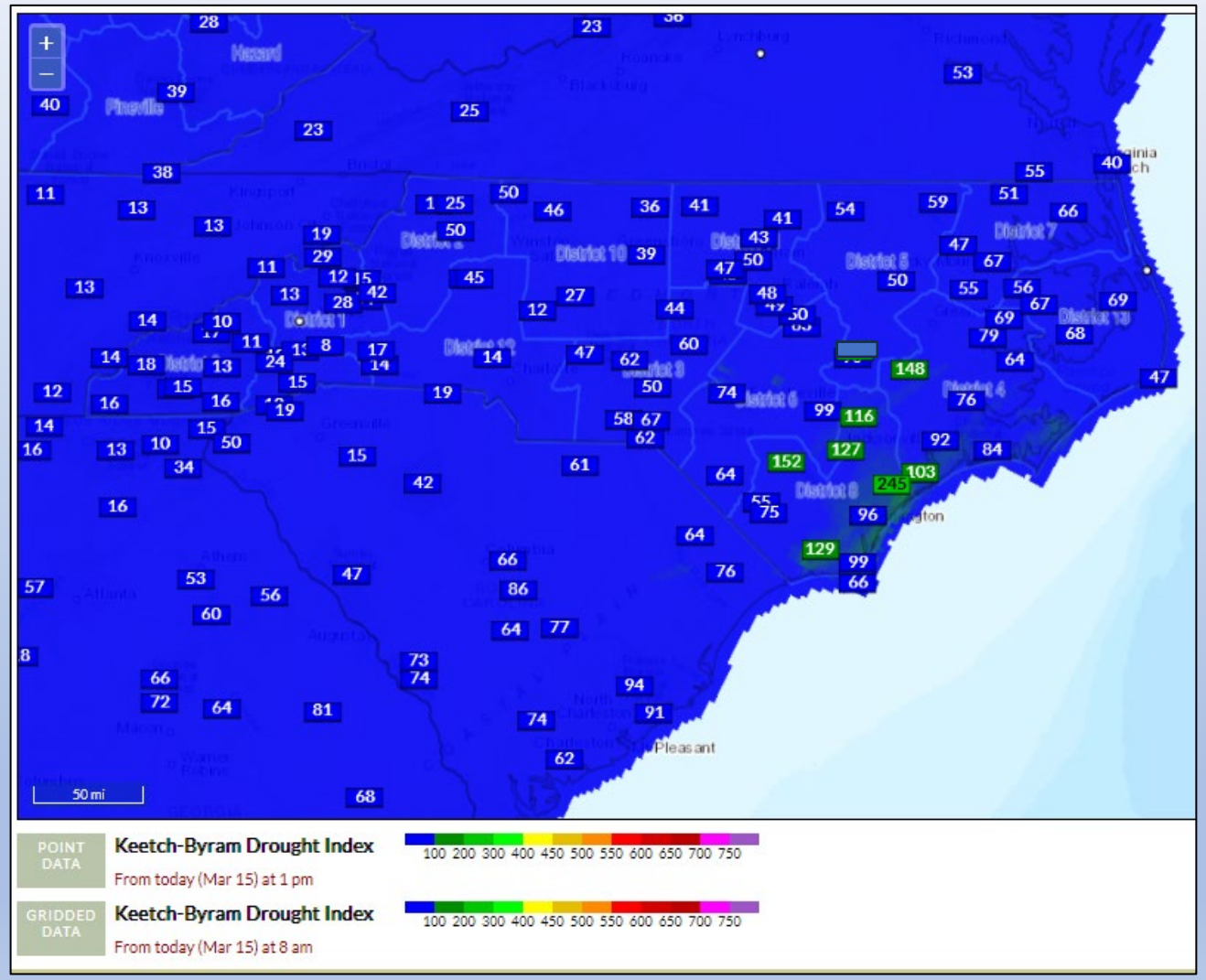
120-Day SPI



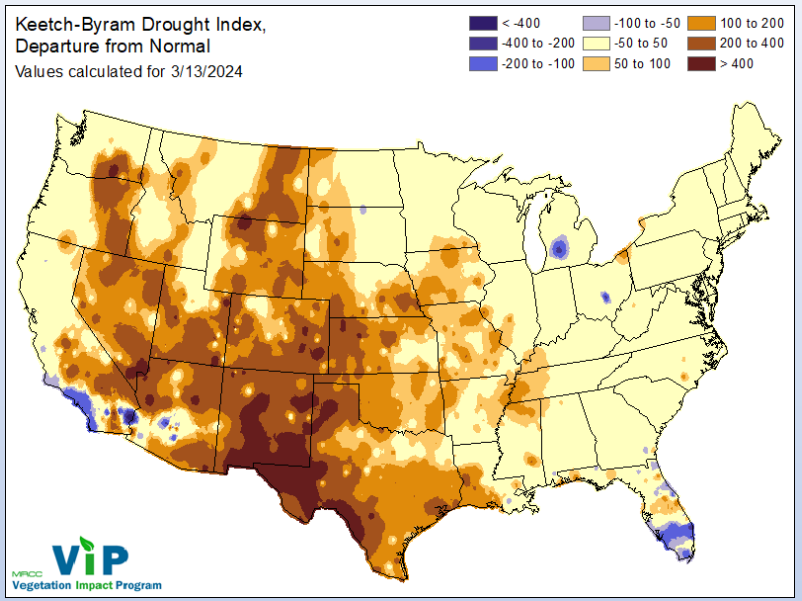
Description of Standardized Precipitation Index

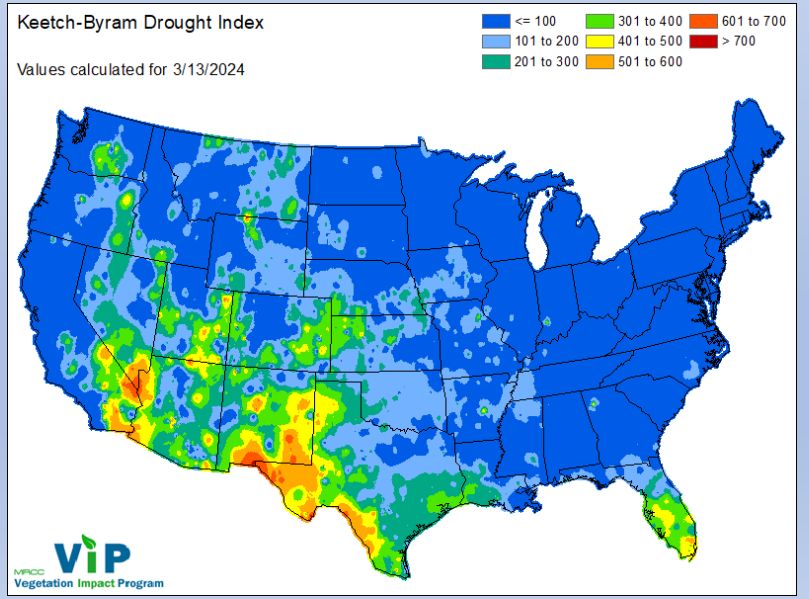
KBDI - Gridded & Station Points

FWIP (Point calculation from WIMS @ 1300 on 3/15/24, SCO created Grid ending 0800 3/15/24)



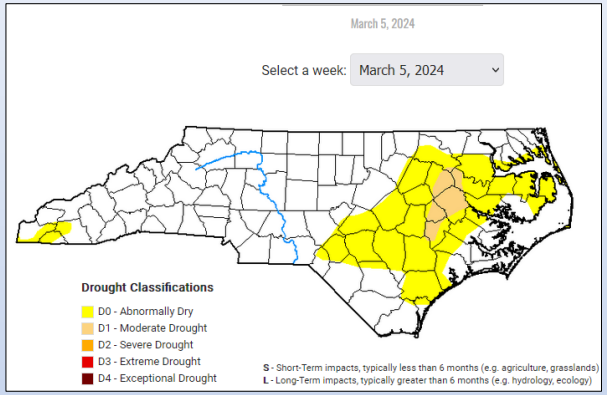
Product below is created by the Midwestern Regional Climate Center. See FAQ.



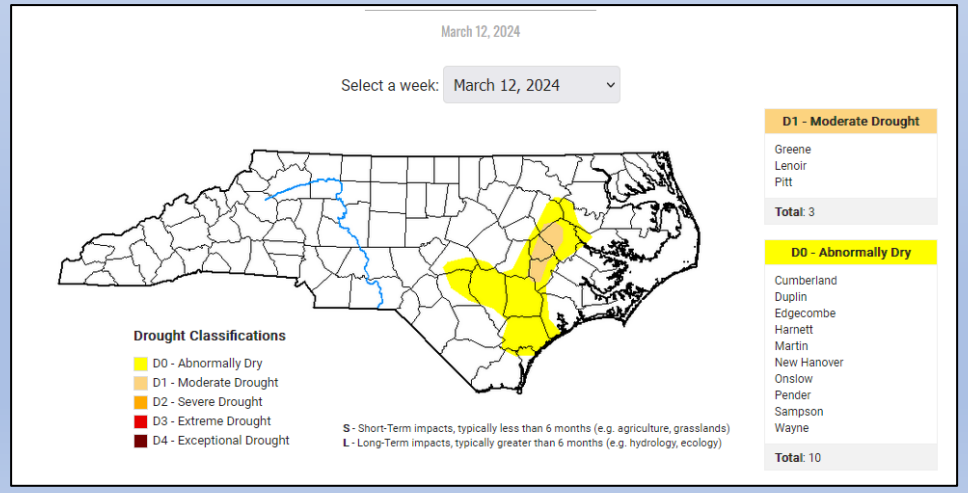


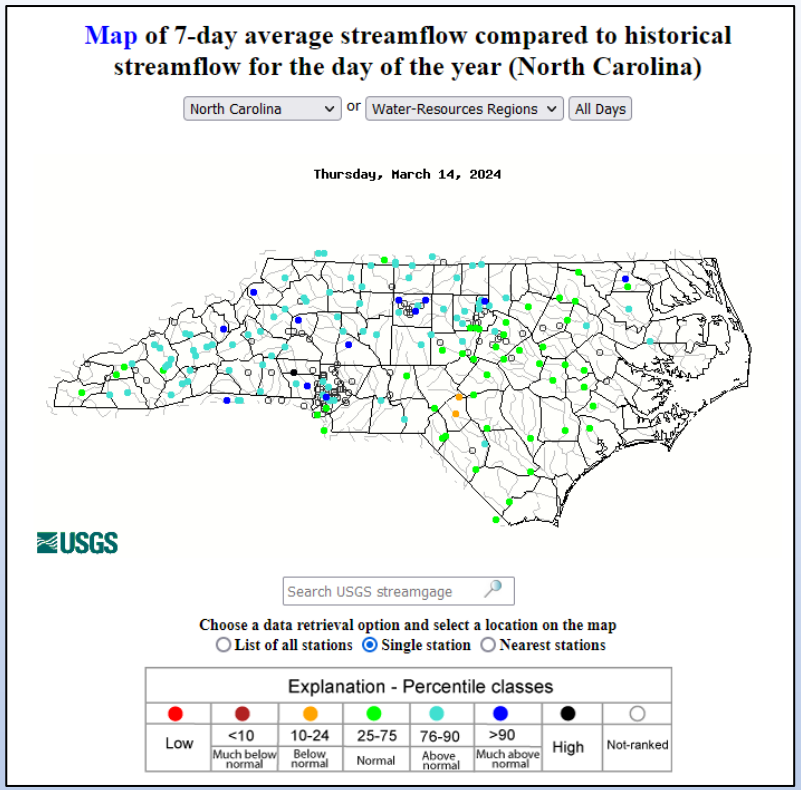
Drought Situation

Previous Week:



Current Week:





- D-0 Abnormally Dry Conditions Decreased (~10% of State)
- D-1 Moderate Drought Decreased (~1.5% of State)

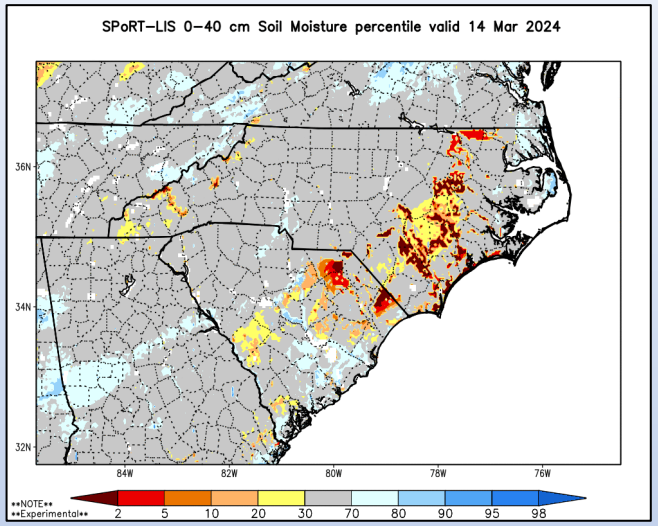
- 7-Day Stream flow averages have responded to rain influences, generally normal to above normal.

- Green-Up & Higher Evaporative Demand will reduce stream flows as we progress into Spring 2024. If dry spells continue expect more rapid decreases.

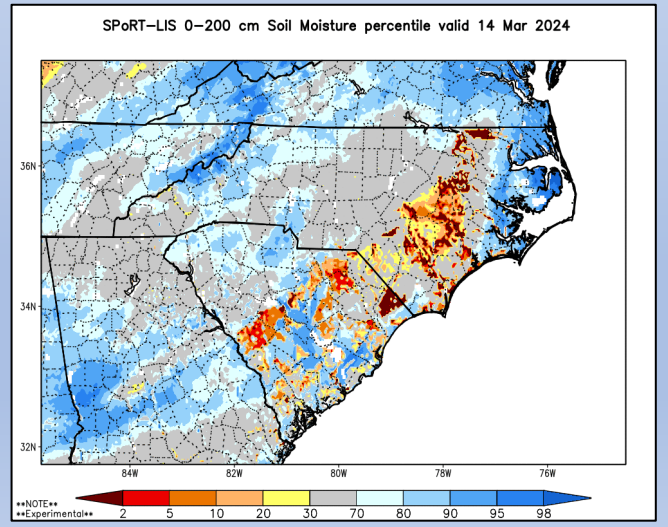
Sources: https://www.ncdrought.org/map-archives , https://waterwatch.usgs.gov/index.php?m=pa07d&r=nc&w=map

SPoRT Modeled Relative Soil Dryness

0-40 cm Depth

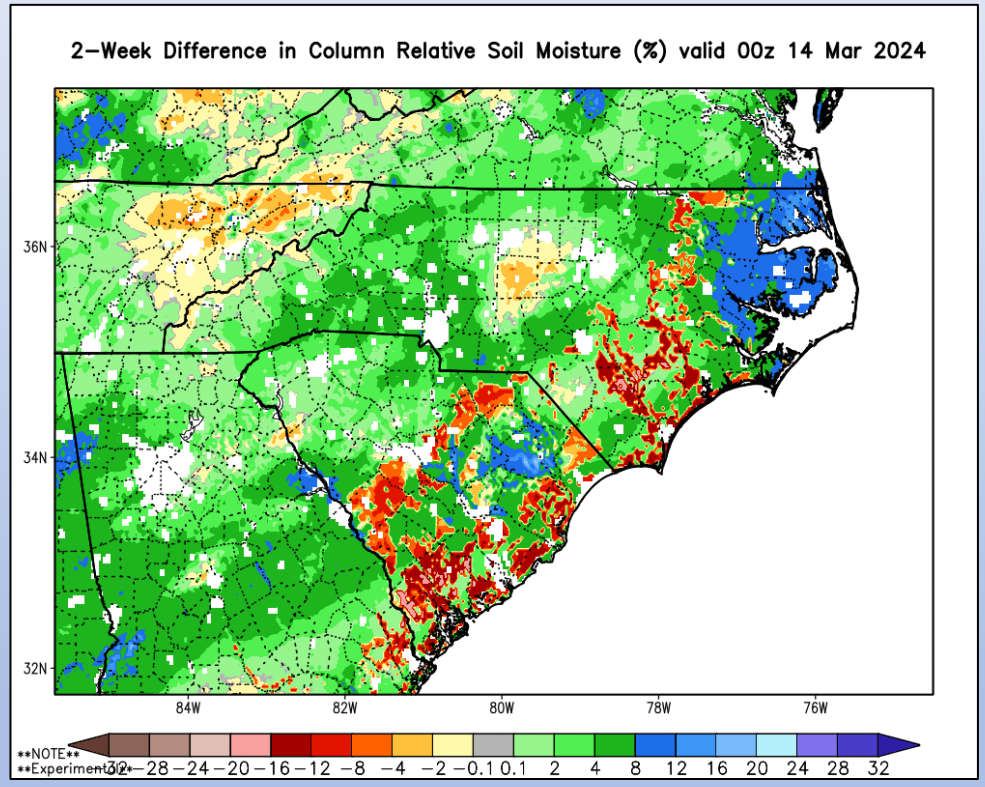


0-200 cm Depth



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

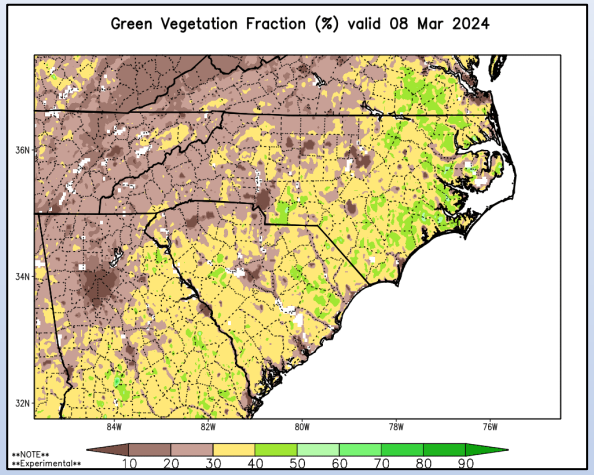
(Ignore darkest red polygons as they appear to be processing artifacts from SPoRT Outputs.)



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

Green Fraction & Green-Up Anomaly

Last Week

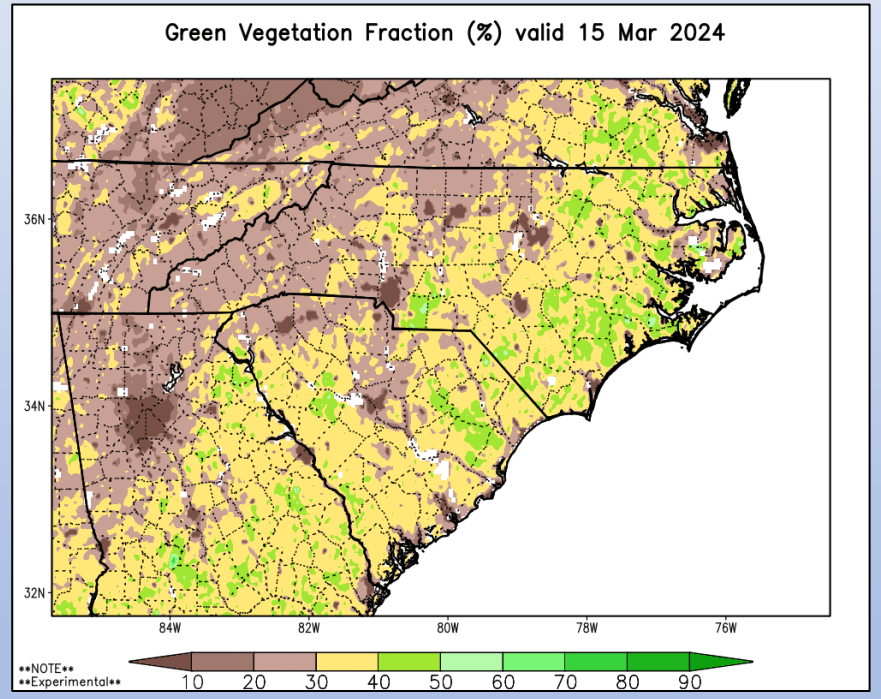


Lower elevation sites are generally 1-2 weeks ahead of "normal" related to green-up processes, due to abnormally warm conditions and generally conducive rainfall.
Not Pocosin or Bay Environments

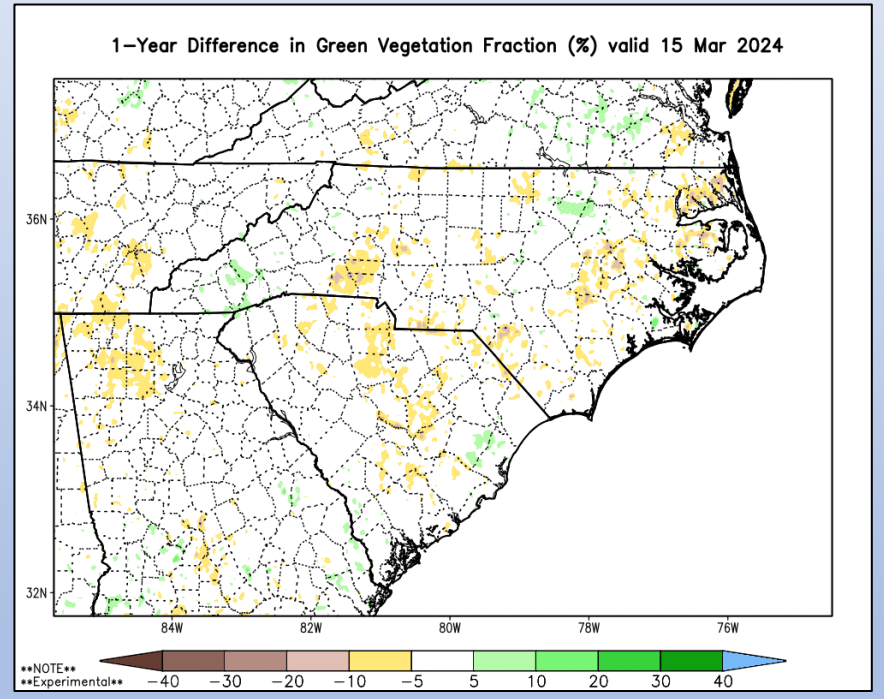
Potential frost & freeze events next week could easily slow or reset some of the more sensitive species.

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.

Current



1 Year Change

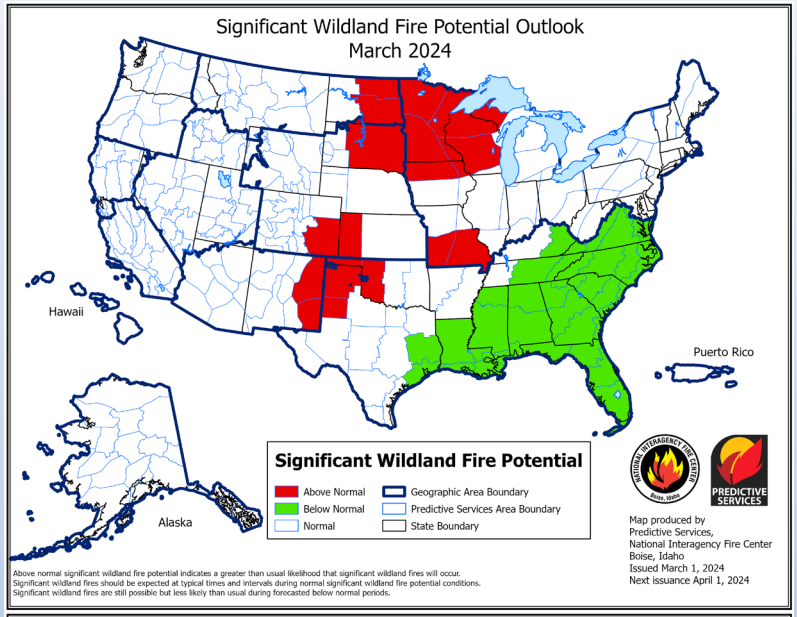


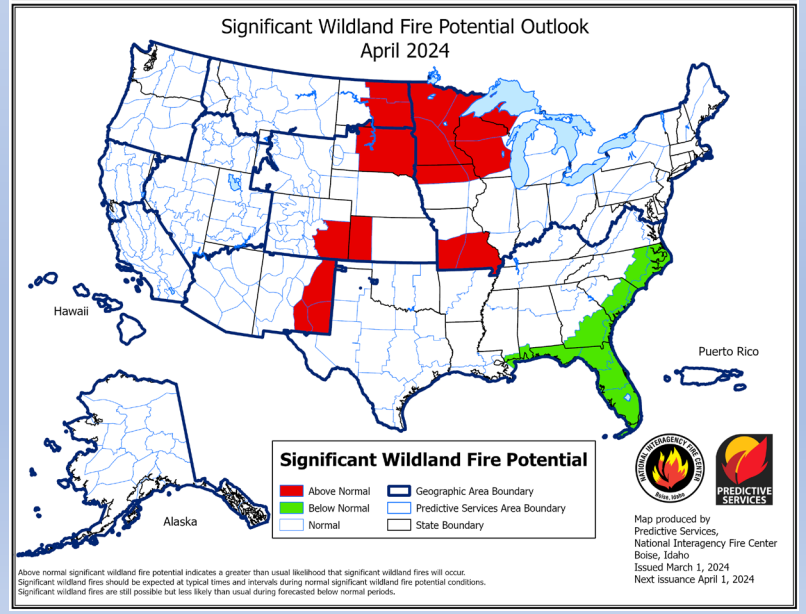
Last year was a little ahead of 2024, hence the slight "decline" in GVF.

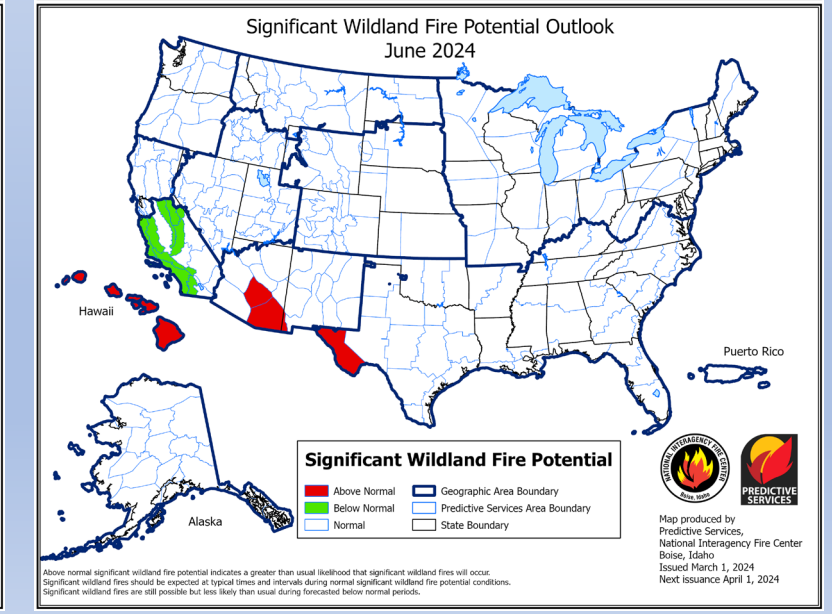
Link: https://weather.msfc.nasa.gov/cgi-bin/basicLooper.pl?category=lis_NC&initialize=first&regex=gvf_20230228

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.

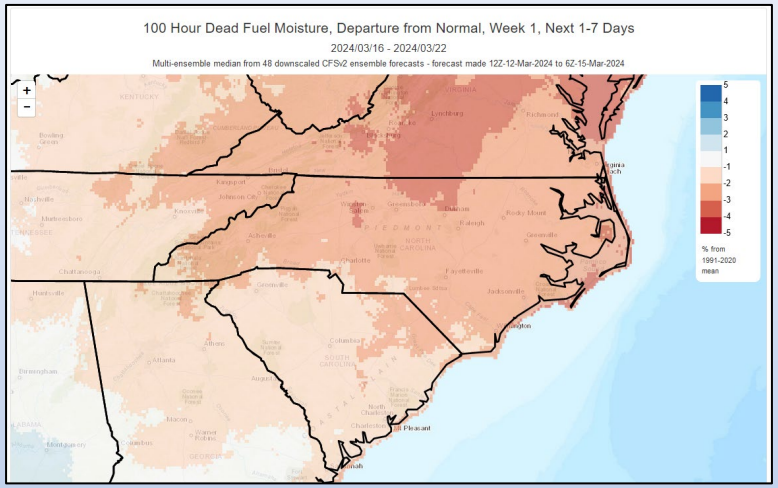
***Forecast uncertainty could easily lead to an expansion of "Normal" or "Above Normal" Fire Potential if abnormally dry conditions expand/worsen going into Spring.**

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.

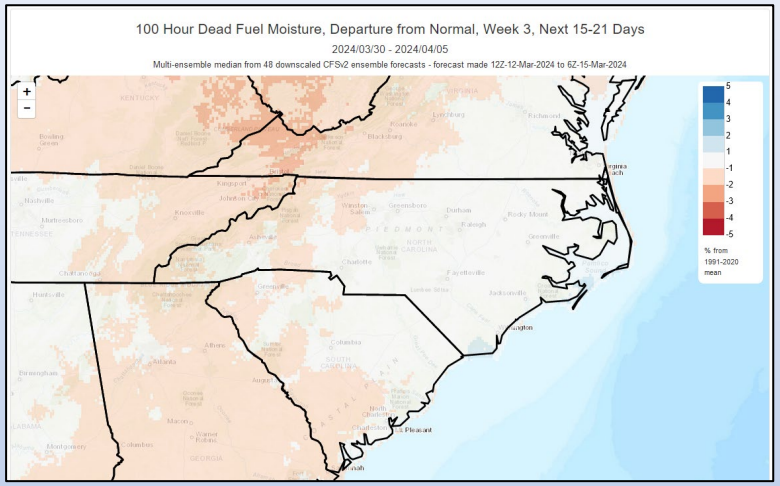
Modeled Departure from Normal by Week: 100-hr Fuels

Output relies on experimental forecast outputs and is subject to change

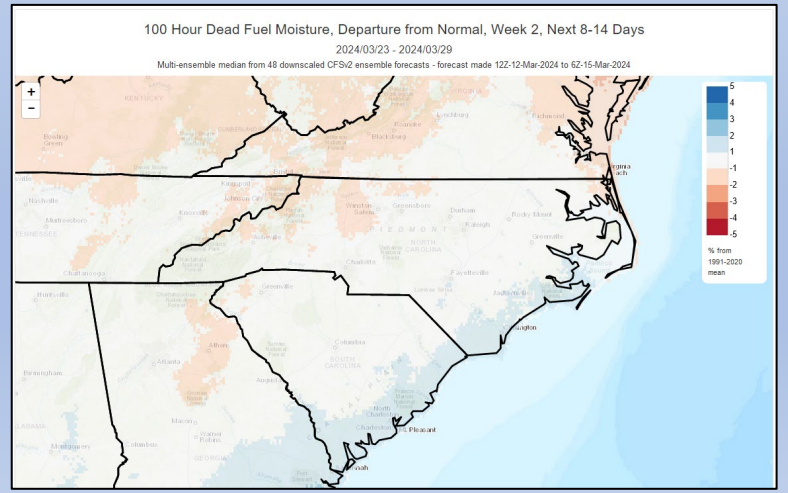
Week-1



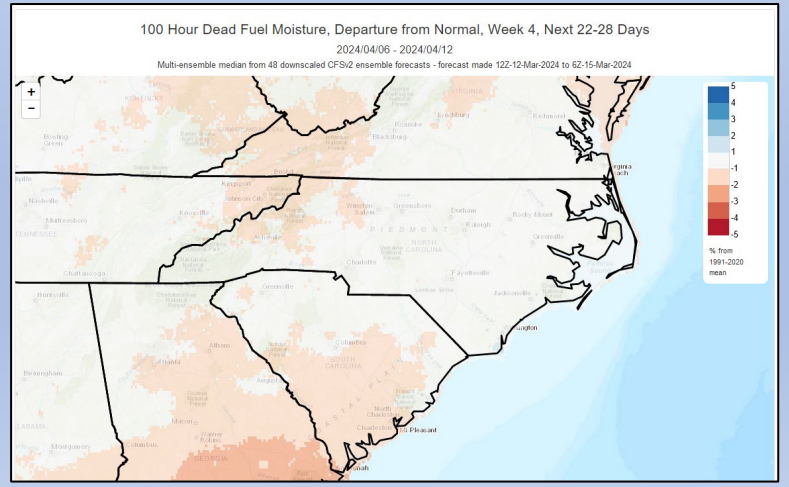
Week-3



Week-2



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 more pronounced drying depicted for Week-1, as we miss the heavy rainfall this weekend. Weeks 2-4 shows potential for fuel moistures to return to more near normal as a potentially more active weather pattern emerges.

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.

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