



January - 2023

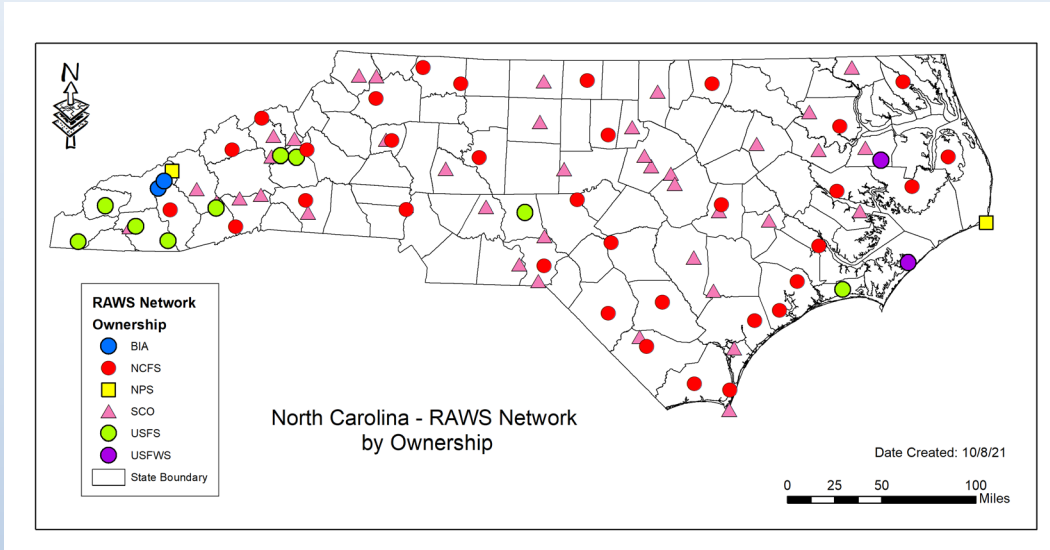
Monthly/Seasonal Fire Outlook

Jamie Dunbar
Fire Environment Staff Forester
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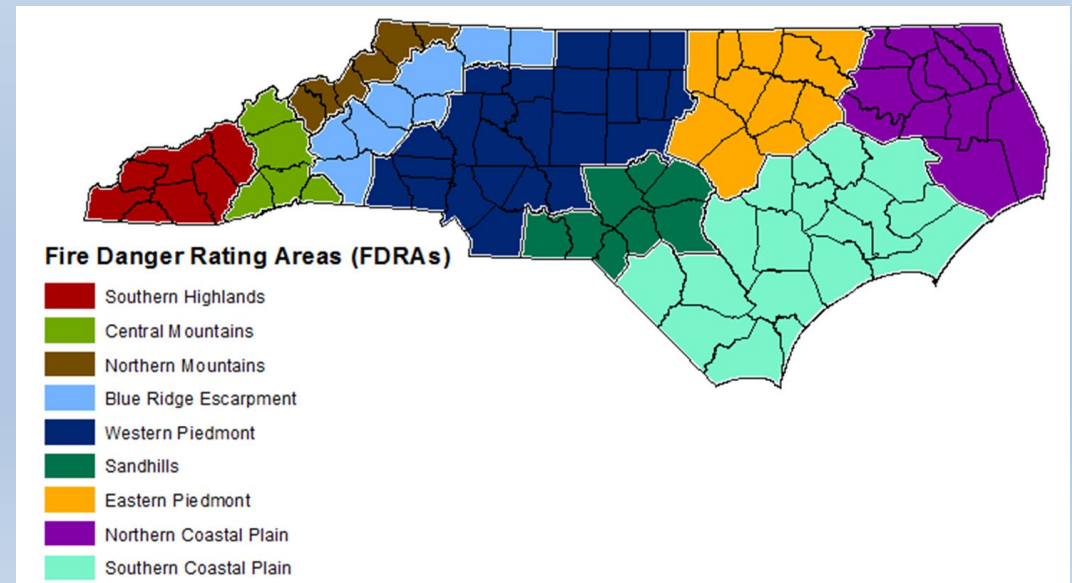
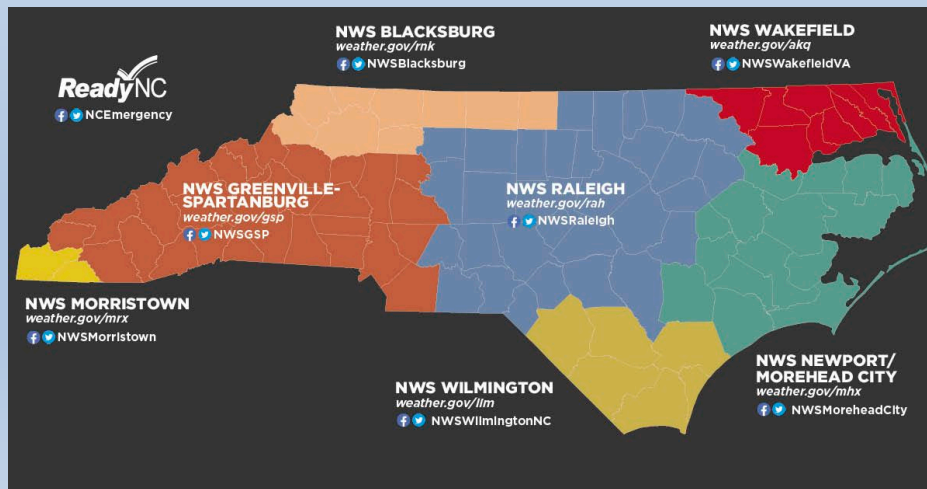




Spring Fire Outlook



- 39 Agency RAWS Stations (Includes 6 Portables)
- Many Partner Stations
- 1 Soil Moisture Station & 1 Pending
- 9 FDRAs
- 7 NWS Forecast Offices
- NFDRS V4, FDOP Signature Pending

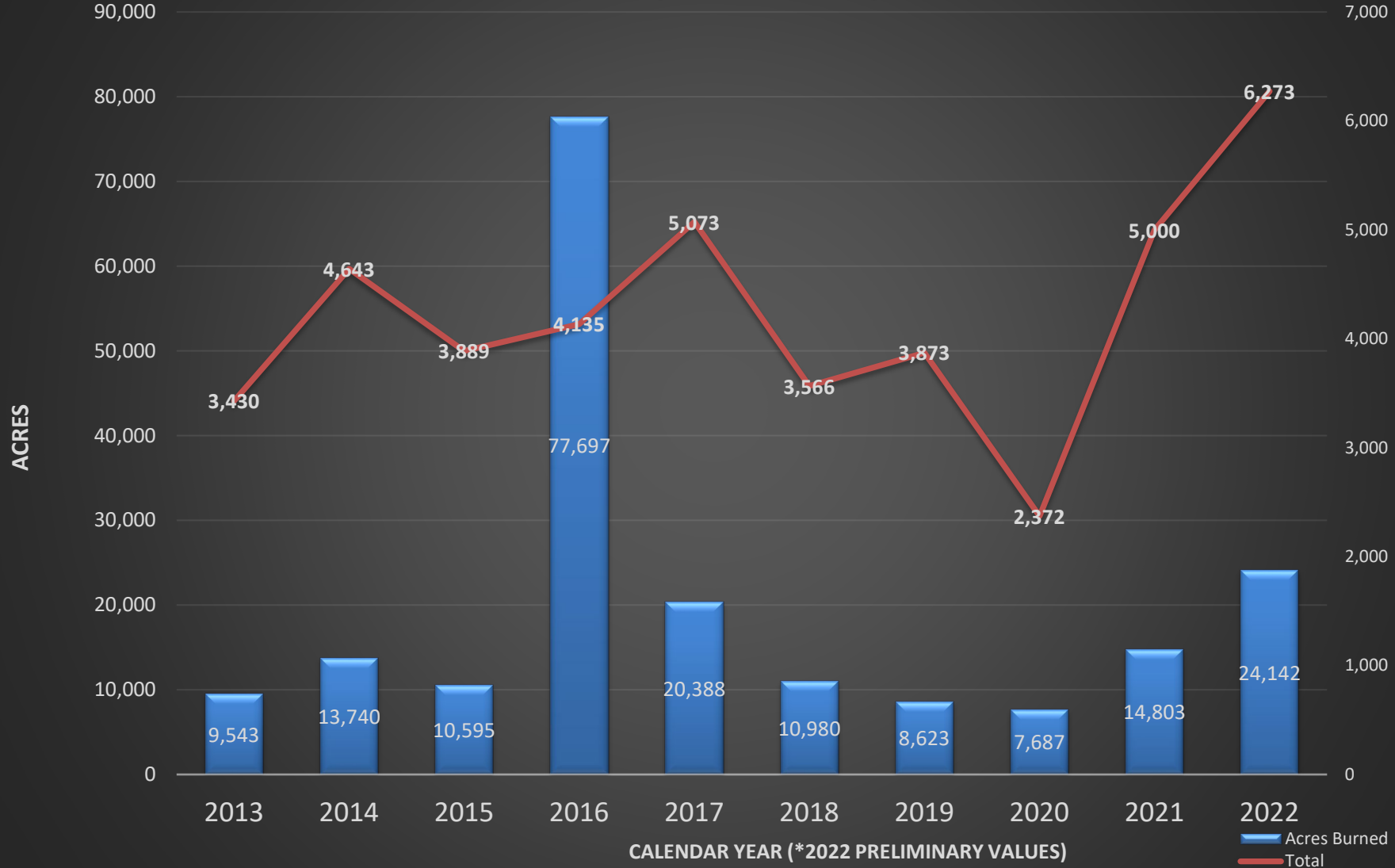




Spring Fire Outlook



10-Yr Fire Acreage & Count by CY - Statewide (2013 - 2022*)

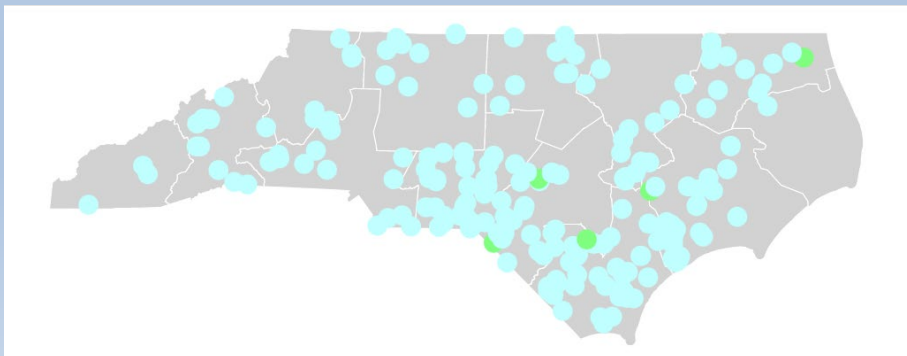
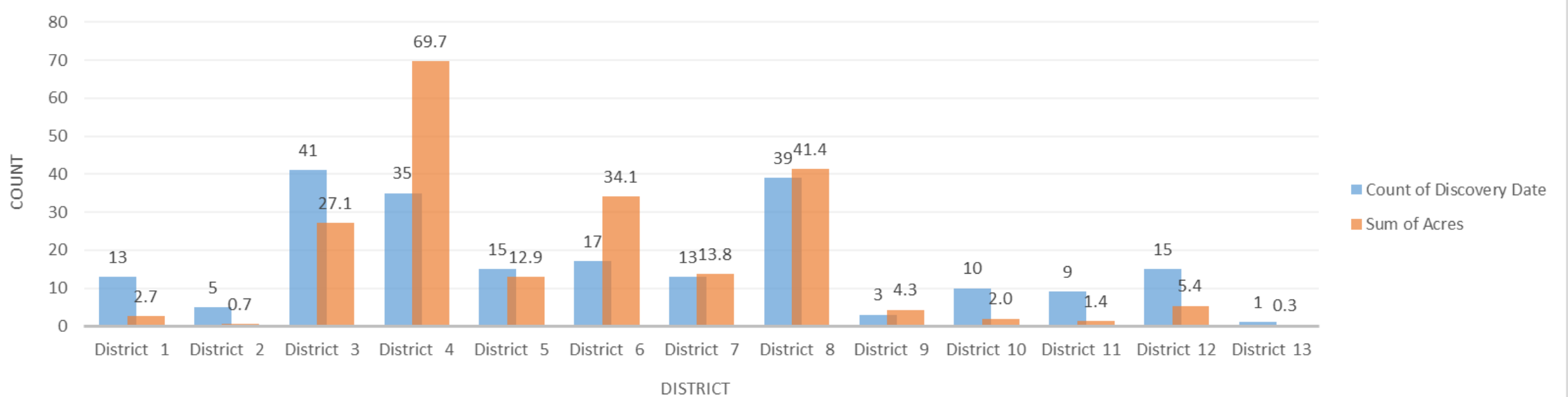


10-YR FARS Extract by
Calendar Year
(Approval Status = All;
2022 Preliminary)



Spring Fire Outlook

NCFS Fire Activity 1/1 - 1/17, 2023
fiResponse Export



Statewide:
+/- 216 fires, 215 acres

~10 Yr. Avg for January is 300
fires, 500 acres

*All values are preliminary, via
Business Intelligence Tool.



Spring Fire Outlook

Days since Precip of at least 0.25"

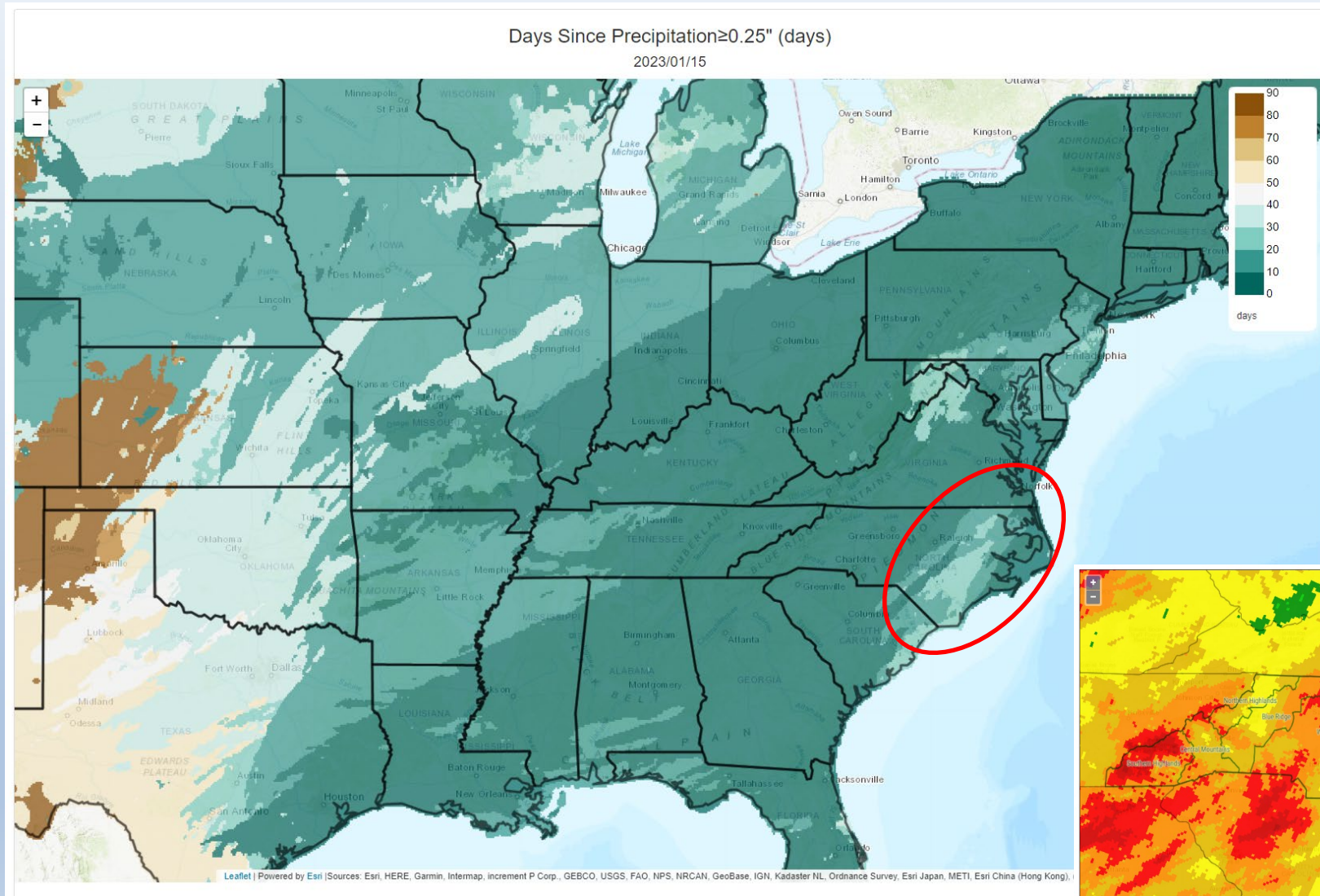


For NC:

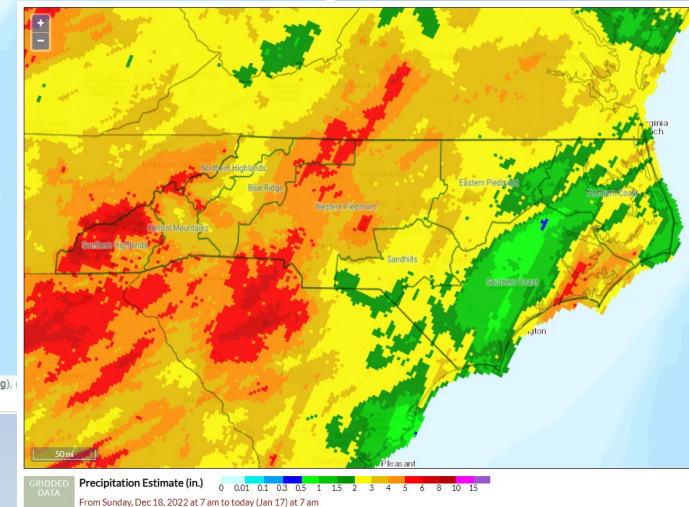
Generally, 4-6 days west.

Driest areas approaching 21+ days since last reasonably wetting rain. (portions of red circle)

Model Run on 1/15/23



30-Day Precip Estimate, Ending 1/17 am





Spring Fire Outlook

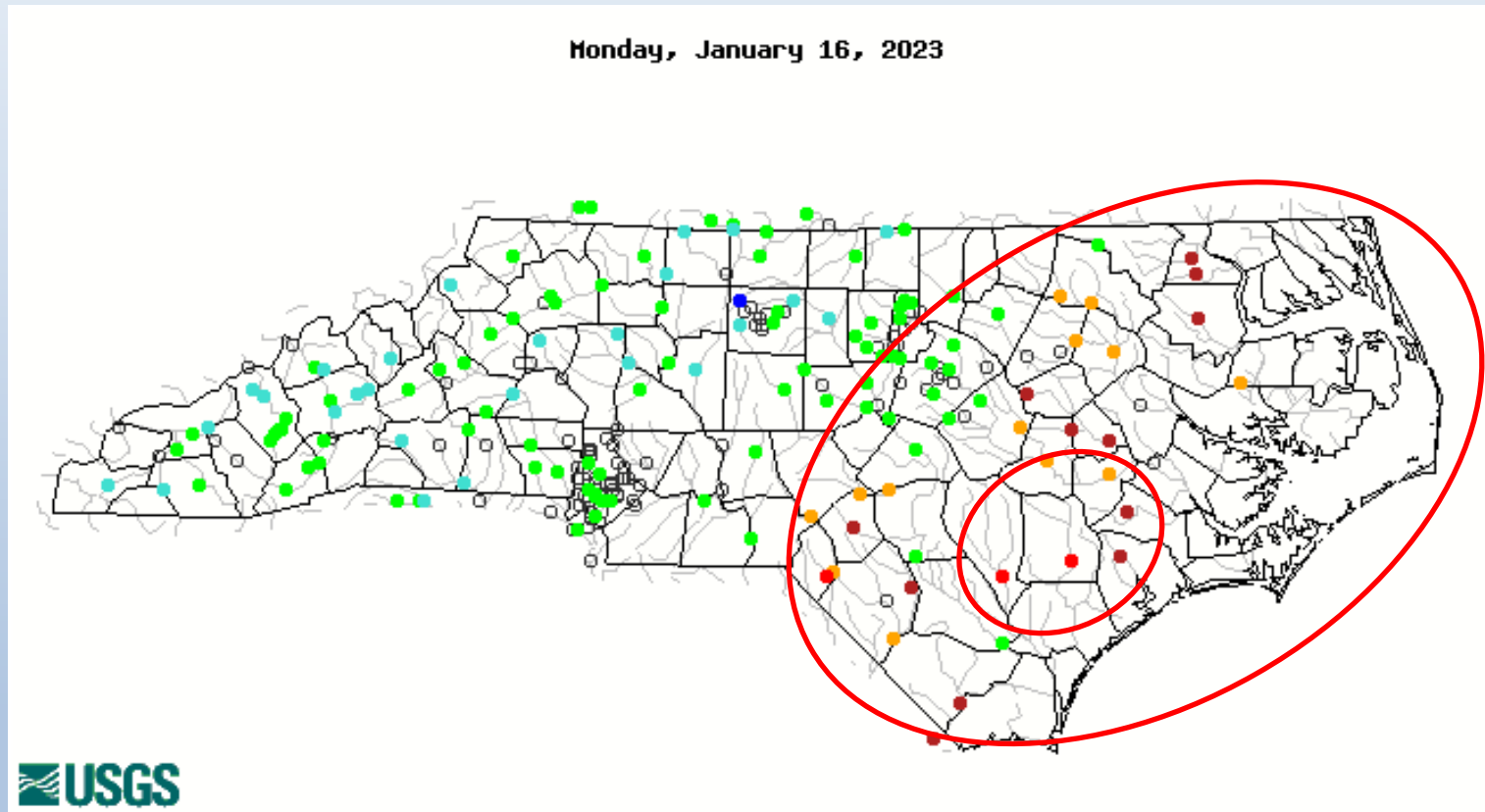


<https://waterwatch.usgs.gov/index.php?m=pa07d&r=nc&w=map>

7-Day Avg.
Stream Flow
Conditions

Continued
Below to
Much Below
Normal to the
East...

Improvements
West...



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



Spring Fire Outlook

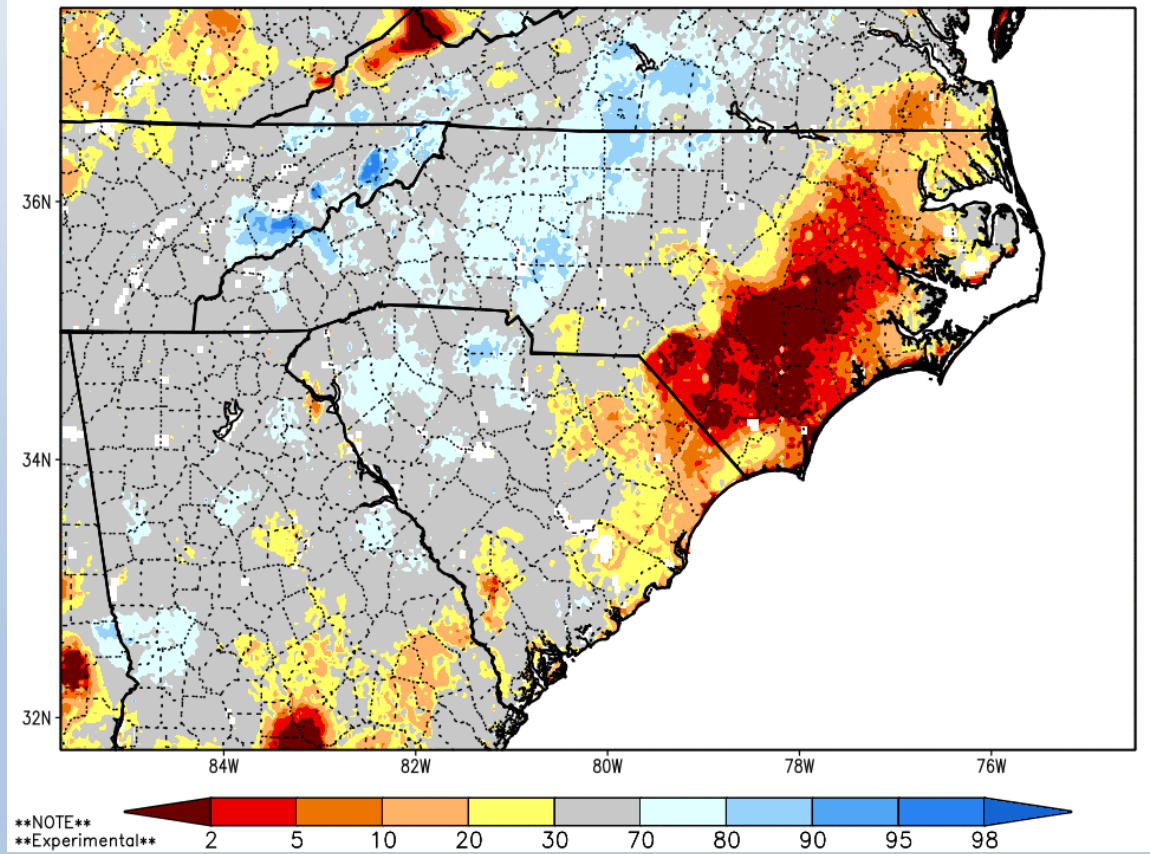
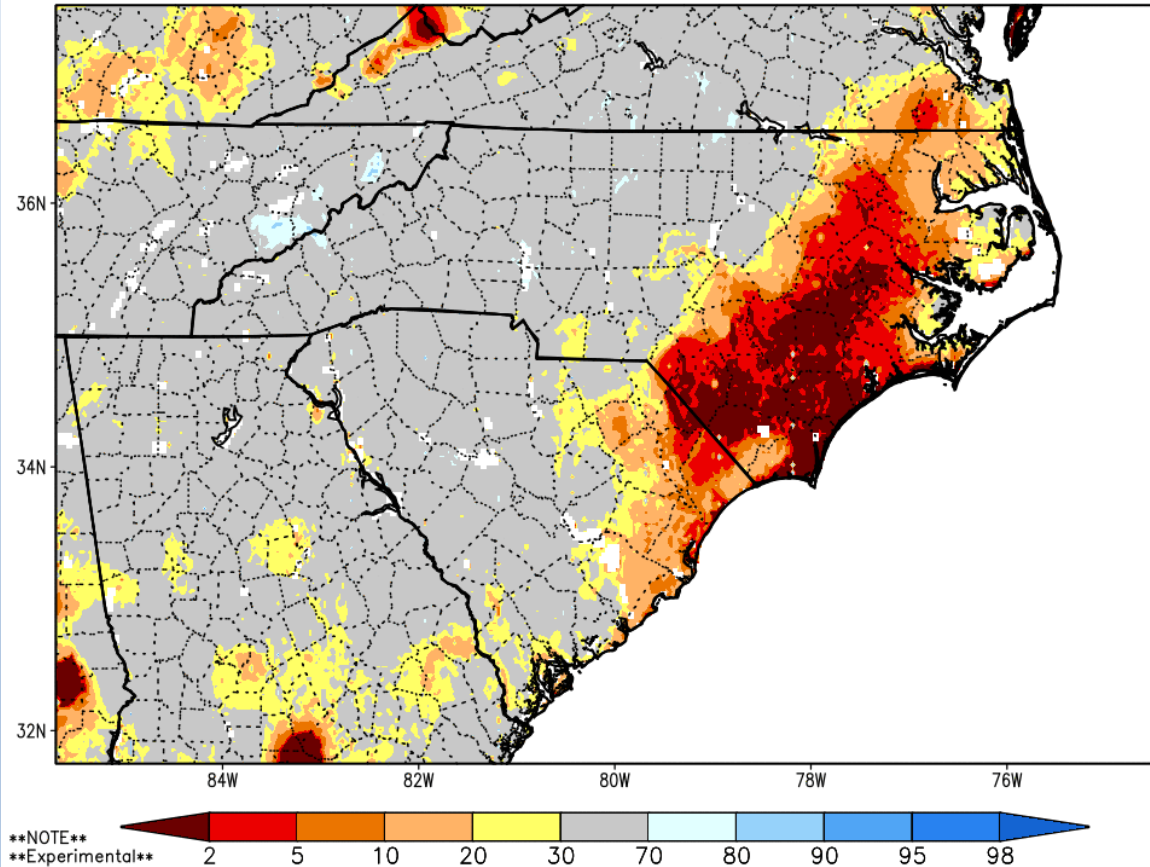


~ 0-16"

~ 0-39"

SPoRT-LIS 0-40 cm Soil Moisture percentile valid 17 Jan 2023

SPoRT-LIS 0-100 cm Soil Moisture percentile valid 17 Jan 2023



Current with trend for extension of dryness

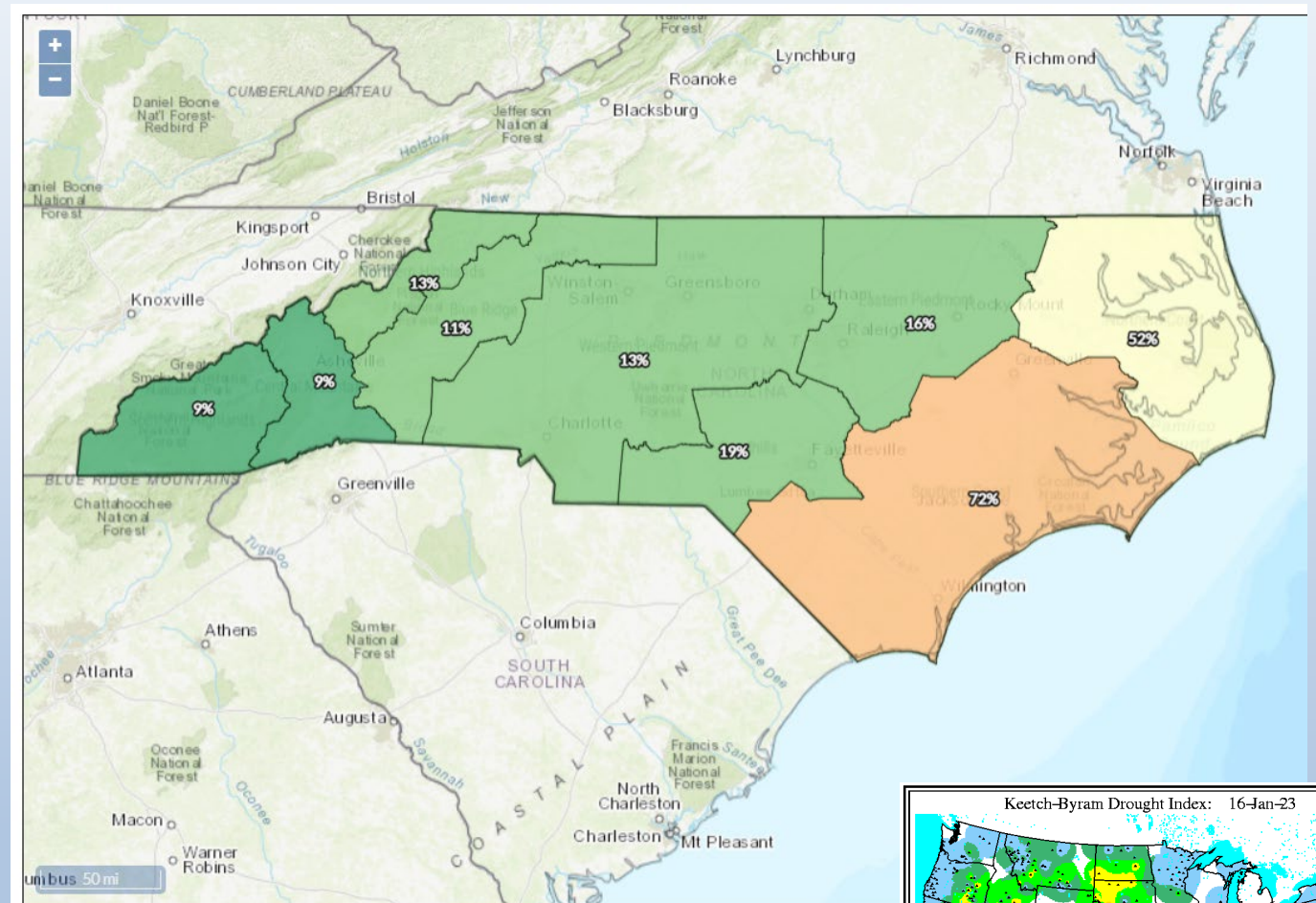
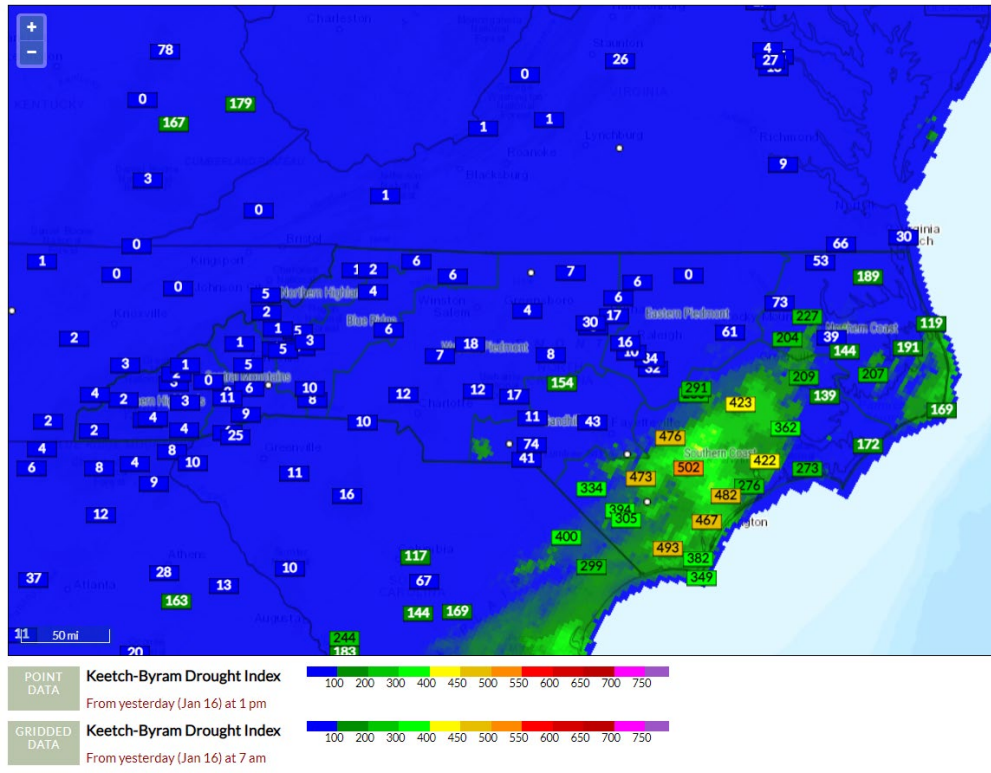
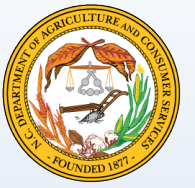
Two NASA based products links to right.

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

<https://nasagrace.unl.edu/>

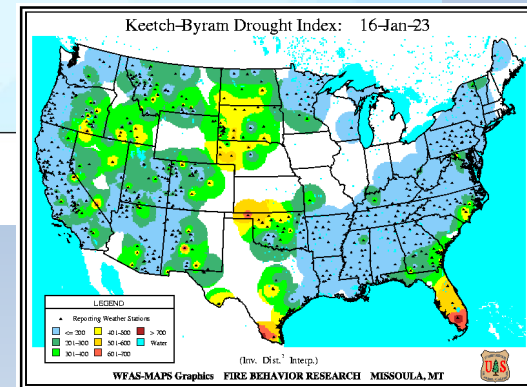


Spring Fire Outlook



Note: South Coast FDRA Forecast 72nd Percentile on 1/18

— By FDRA (for all days)

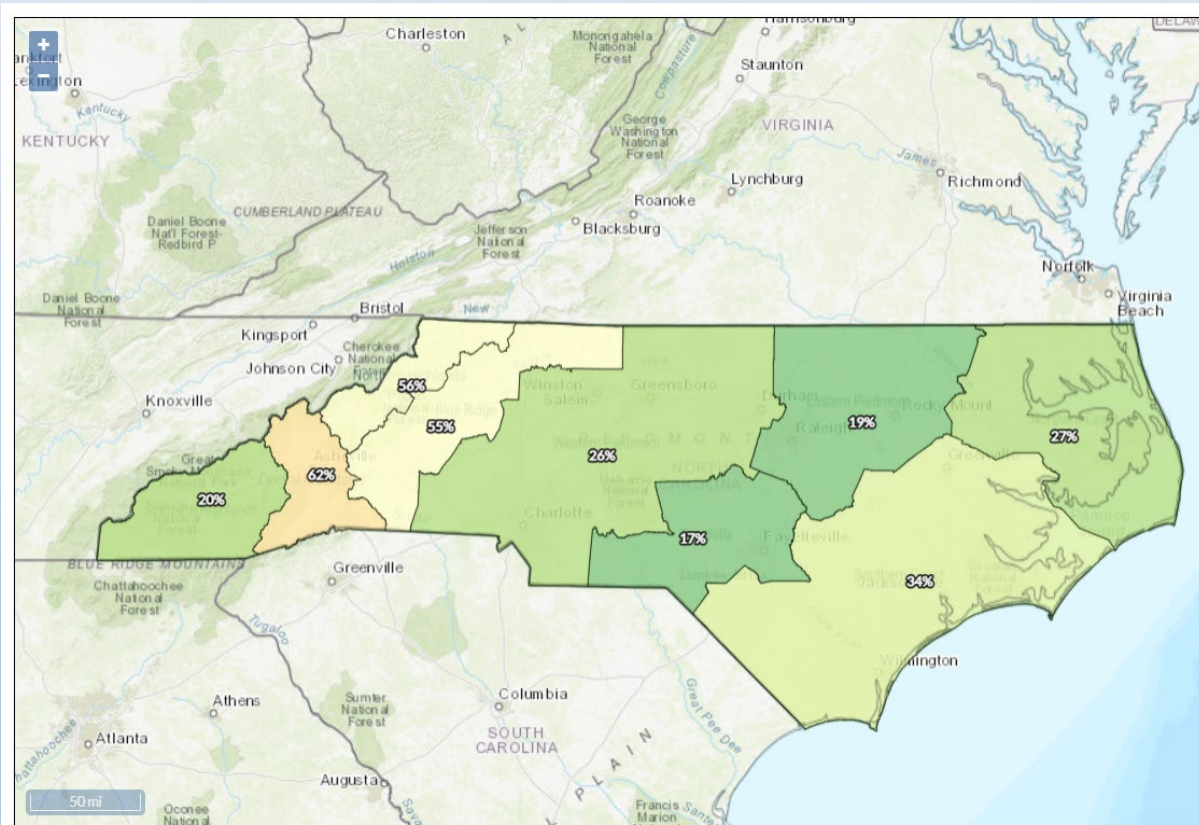




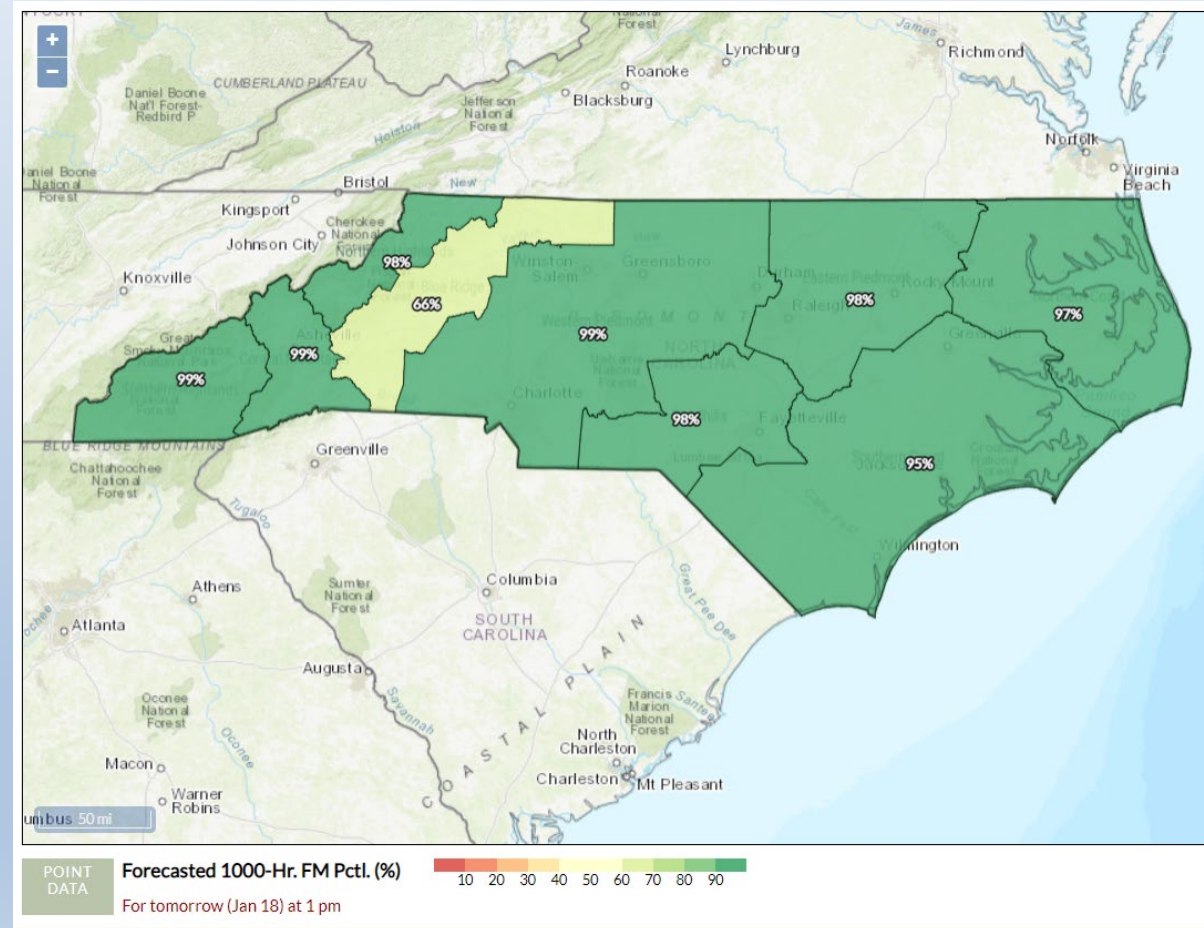
Spring Fire Outlook



ERC Percentile Forecast for 1/18
By FDRA (for all days)



1000-Hr Percentile Forecast for 1/18
By FDRA (for all days)

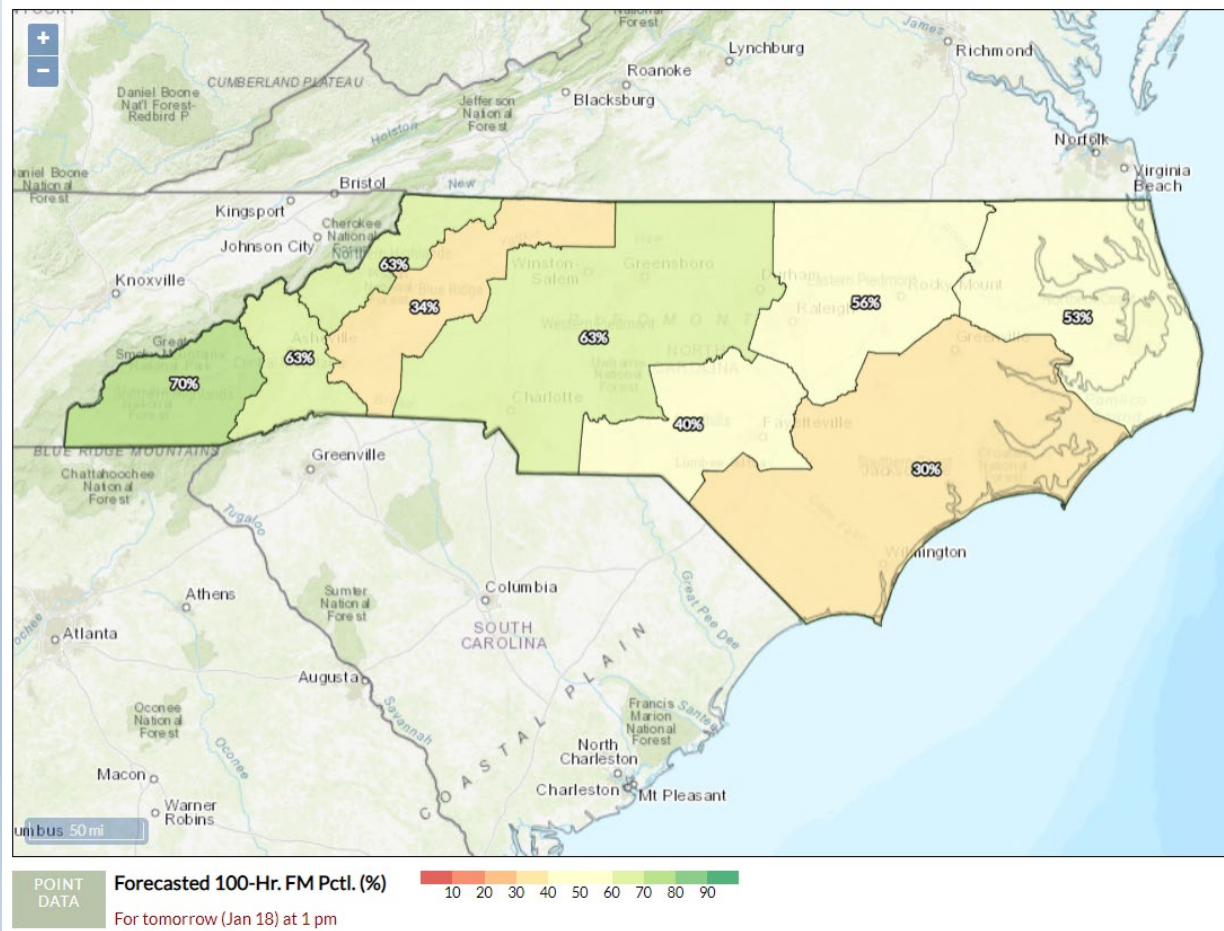




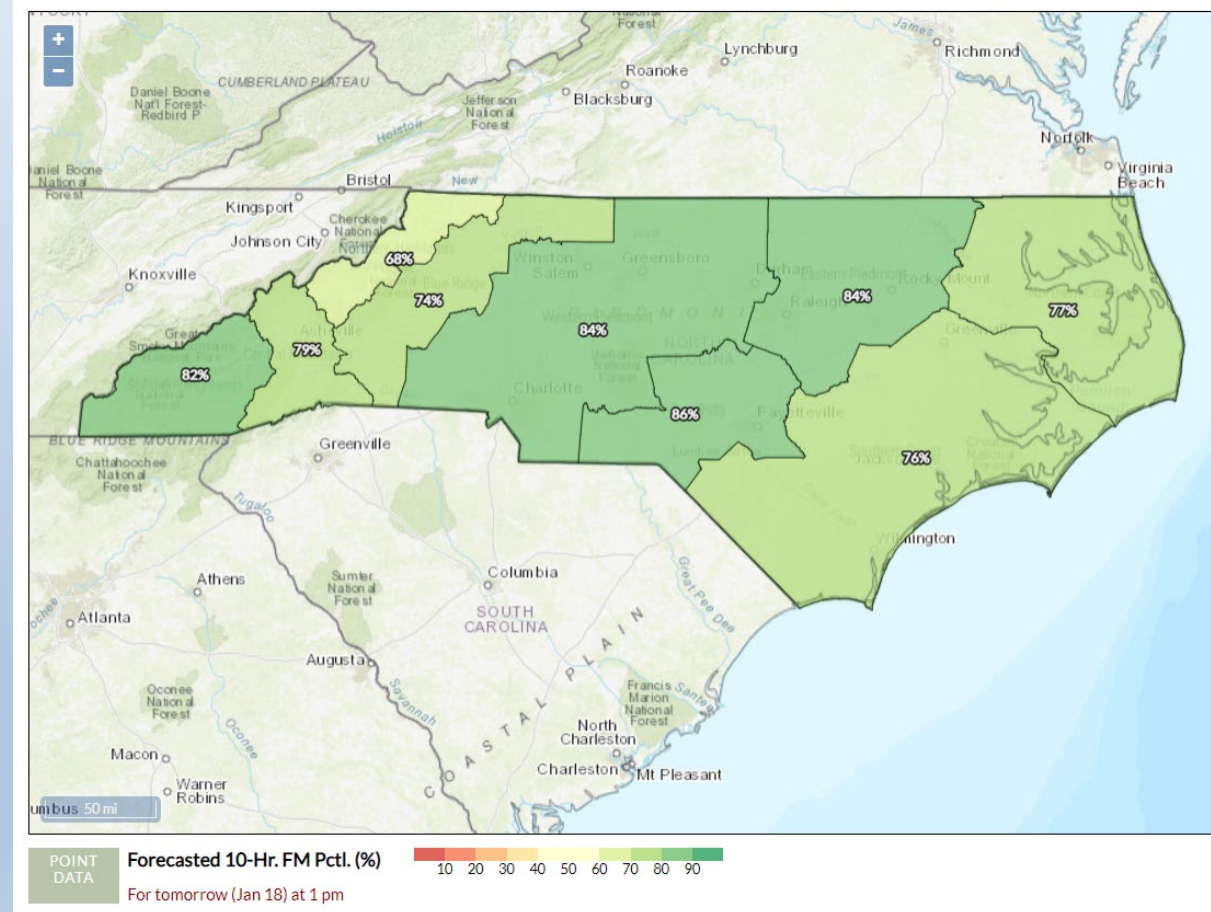
Spring Fire Outlook



100-Hr Percentile Forecast for 1/18
By FDRA (for all days)



10-Hr Percentile Forecast for 1/18
By FDRA (for all days)



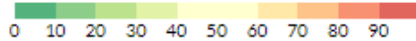


Spring Fire Outlook

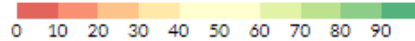
Observations on 1/17/23 – FWIP By Station

DIST	FDRA	WIMS_ID	STATION_NAME	NFDR_DATE	MSGC	BI	ERC	IC	SC	KBDI	1HR	10HR	100HR	1000HR	HRB	WOODY	TEMP	RH	WIND	PRECIP	DUR
9	S. Highlands	315803	Highlands	2023-01-17	16X2P	0.00	0.00	0.00	0.00	6.00	26.17	24.52	22.26	26.20	30.00	50.00	48°F	96%	NW 4 mph	0.20 in.	5
9	S. Highlands	315802	Locust Gap	2023-01-17	16X3P	0.00	0.00	0.00	0.00	3.00	34.95	28.43	22.56	25.91	30.00	50.00	54°F	86%	W 4 mph	0.57 in.	10
9	S. Highlands	315602	Tusquitee	2023-01-17	16X3P	0.00	0.00	0.00	0.00	2.00	34.96	27.44	23.14	25.96	30.00	50.00	52°F	97%	ENE 2 mph	0.49 in.	8
9	S. Highlands	315501	Cheoah	2023-01-17	16X3P	0.00	0.00	0.00	0.00	2.00	35.00	29.22	22.81	25.51	30.00	60.00	53°F	98%	Calm	0.27 in.	9
9	S. Highlands	313902	Cherokee	2023-01-17	16Y2P	0.00	0.00	0.00	0.00	0.00	35.00	30.90	21.17	24.49	30.00	60.00	48°F	100%	WNW 5 mph	0.58 in.	10
9	S. Highlands	313903	Cow Mountain	2023-01-17	16X3P	0.00	0.00	0.00	0.00	0.00	32.34	26.35	22.11	24.86	30.00	60.00	47°F	100%	Calm	0.61 in.	9
9	S. Highlands	314040	Frying Pan Mountain	2023-01-17	16X2P	0.00	0.00	0.00	0.00	3.00	30.58	26.98	20.13	23.74	30.00	60.00	46°F	96%	Calm	0.07 in.	4
9	S. Highlands	315902	Jackson County	2023-01-17	16X2P	0.00	0.00	0.00	0.00	0.00	34.51	24.15	20.85	24.55	30.00	60.00	46°F	100%	W 2 mph	0.33 in.	7
9	S. Highlands	314041	Mountain Research Station	2023-01-17	16X3P	12.70	2.90	0.00	7.80	2.00	22.95	23.98	20.53	23.82	30.00	60.00	54°F	79%	NE 4 mph	0.15 in.	6
9	S. Highlands	313904	Tow String	2023-01-17	16X3P	0.00	0.00	0.00	0.00	0.00	35.00	27.93	21.90	24.58	30.00	60.00	49°F	99%	Calm	0.53 in.	10
9	S. Highlands	315840	Wayah Bald Mountain	2023-01-17	16X3P	0.00	0.00	0.00	0.00	0.00	34.45	28.15	22.57	26.77	30.00	60.00	42°F	100%	W 8 mph	0.76 in.	9
DIST	FDRA	WIMS_ID	STATION_NAME	NFDR_DATE	MSGC	BI	ERC	IC	SC	KBDI	1HR	10HR	100HR	1000HR	HRB	WOODY	TEMP	RH	WIND	PRECIP	DUR
10	W. Piedmont	314602	Lexington	2023-01-17	16X1P	0.00	0.00	0.00	0.00	20.00	34.89	20.08	18.81	24.73	30.00	50.00	49°F	90%	WSW 4 mph	0.05 in.	4
10	W. Piedmont	312342	NC A&T SU Research Farm	2023-01-17	16X1P	0.00	0.00	0.00	0.00	6.00	34.84	18.73	19.11	24.06	30.00	50.00	48°F	87%	SW 4 mph	0.05 in.	3
10	W. Piedmont	314541	Piedmont Research Station	2023-01-17	16X1P	0.00	0.00	0.00	0.00	9.00	34.80	17.72	19.61	24.75	30.00	50.00	48°F	89%	WSW 6 mph	0.03 in.	2
10	Blue Ridge	310302	Pilot Mountain	2023-01-17	16X1P	0.00	0.00	0.00	0.00	9.00	34.96	23.76	19.71	24.53	30.00	60.00	43°F	97%	SW 3 mph	0.13 in.	6
10	Blue Ridge	310301	Raven Knob (surry Cty)	2023-01-17	16X2P	0.00	0.00	0.00	0.00	9.00	34.30	21.33	20.38	24.87	30.00	60.00	45°F	100%	Calm	0.04 in.	4
10	W. Piedmont	310540	Upper Piedmont Research Stn	2023-01-17	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	-999	44°F	87%	W 4 mph	0.14 in.	6
DIST	FDRA	WIMS_ID	STATION_NAME	NFDR_DATE	MSGC	BI	ERC	IC	SC	KBDI	1HR	10HR	100HR	1000HR	HRB	WOODY	TEMP	RH	WIND	PRECIP	DUR
11	W. Piedmont	312501	Duke Forest	2023-01-17	16X1P	0.00	0.00	0.00	0.00	33.00	34.89	17.40	18.89	24.63	30.00	50.00	48°F	91%	SW 4 mph	0.05 in.	4
11	E. Piedmont	314941	Lake Wheeler Rd Field Lab	2023-01-17	16X1P	0.00	0.00	0.00	0.00	13.00	34.93	15.49	18.79	23.98	30.00	60.00	48°F	82%	SW 8 mph	0.04 in.	3
11	E. Piedmont	310841	Oxford Tobacco Research Stn	2023-01-17	16X1P	0.00	0.00	0.00	0.00	7.00	33.03	17.59	19.18	23.87	30.00	60.00	45°F	88%	SW 6 mph	0.11 in.	4
11	W. Piedmont	310801	Caswell Game Lands	2023-01-17	16X1P	0.00	0.00	0.00	0.00	10.00	34.80	18.92	19.18	24.12	30.00	50.00	46°F	95%	SSW 2 mph	0.10 in.	4
11	W. Piedmont	312640	North Durham Water Reclamation...	2023-01-17	16X1P	0.00	0.00	0.00	0.00	20.00	33.02	15.39	19.48	24.58	30.00	50.00	47°F	86%	SW 3 mph	0.06 in.	2
11	E. Piedmont	314942	Reedy Creek Field Laboratory	2023-01-17	16X1P	0.00	0.00	0.00	0.00	18.00	34.99	16.70	18.73	24.64	30.00	60.00	49°F	78%	WSW 2 mph	0.04 in.	3
DIST	FDRA	WIMS_ID	STATION_NAME	NFDR_DATE	MSGC	BI	ERC	IC	SC	KBDI	1HR	10HR	100HR	1000HR	HRB	WOODY	TEMP	RH	WIND	PRECIP	DUR
12	W. Piedmont	316602	Mt. Island Lake	2023-01-17	16X1P	0.00	0.00	0.00	0.00	14.00	31.96	16.05	19.40	25.41	30.00	50.00	48°F	99%	SW 3 mph	0.07 in.	2
12	Blue Ridge	316302	Rutherford County	2023-01-17	16X2P	2.10	1.70	0.00	0.30	12.00	24.92	21.64	18.15	21.76	30.00	50.00	49°F	91%	Calm	0.02 in.	2
12	Blue Ridge	316341	Spindale Tower	2023-01-17	16X1P	0.00	0.00	0.00	0.00	10.00	28.32	17.14	17.84	24.08	30.00	60.00	47°F	95%	W 5 mph	0.02 in.	2
DIST	FDRA	WIMS_ID	STATION_NAME	NFDR_DATE	MSGC	BI	ERC	IC	SC	KBDI	1HR	10HR	100HR	1000HR	HRB	WOODY	TEMP	RH	WIND	PRECIP	DUR
13	North Coast	317901	Fairfield	2023-01-17	16X0P	52.70	37.80	3.50	13.30	209.00	13.12	14.97	19.84	23.61	50.00	90.00	55°F	52%	SW 3 mph	0.00 in.	0
13	North Coast	315201	Pocosin Lakes	2023-01-17	16X0P	57.70	45.50	5.10	13.50	146.00	11.45	12.96	19.07	23.69	50.00	90.00	54°F	50%	SW 3 mph	0.00 in.	0
13	North Coast	315407	Buxton	2023-01-17	16X0P	119.10	52.20	7.90	56.90	172.00	12.91	14.34	18.94	21.77	30.00	50.00	59°F	59%	SW 8 mph	0.00 in.	0
13	North Coast	315406	Dare Bomb Range (fr2)	2023-01-17	16X1P	122.50	45.60	12.70	69.30	193.00	11.13	14.93	19.90	23.76	50.00	90.00	57°F	43%	SW 11 mph	0.00 in.	0
13	North Coast	315409	Jockey's Ridge State Park	2023-01-17	16X1P	92.50	41.40	4.60	41.40	121.00	14.25	14.80	19.22	22.18	30.00	60.00	54°F	54%	WSW 5 mph	0.00 in.	0
13	North Coast	315240	Tidewater Research Station	2023-01-17	16X1P	106.00	39.40	8.30	58.50	41.00	12.57	13.41	19.35	24.26	50.00	90.00	54°F	53%	SW 12 mph	0.00 in.	0

BI/ERC/IC/SC Percentiles (%)



Fuel Moisture Percentiles (%)



<https://products.climate.ncsu.edu/fwip/nfdrs.php?data=ob>



Spring Fire Outlook

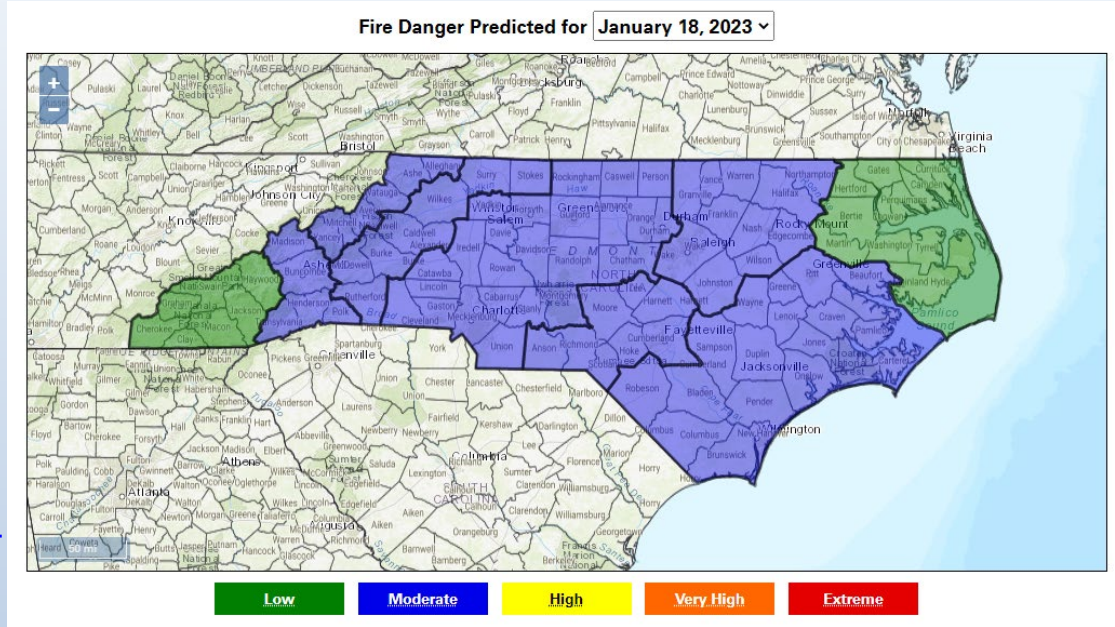


Adjective Rating Map

Smokey Signs, Public Facing

(Uses ERC + 100hr Matrix)

https://climate.ncsu.edu/fwip/nc_danger/



Hazard Level – relevant to NCFS manning and Daily Hazard

(Uses BI + 100hr Matrix)

<https://products.climate.ncsu.edu/fwip/hazard.php>

Fire Weather Intelligence Portal

A product of the State Climate Office of North Carolina

Hazard Assessment Tool

Date: Jan 12, 2023

Location: Southern Coastal

For the Southern Coastal FDRA on January 12, 2023
Includes Beaufort, Bladen, Brunswick, Carteret, Columbus, Craven, Duplin, Greene, Jones, Lenoir, New Hanover, Onslow, Pamlico, Pender, Pitt, Robeson, Sampson, and Wayne counties

Hazard/Staffing Level: **2**

Past 10-day average level: **1.8**

		100-hr FM (Fuel Model X)				
		0-8	8-16	16-17	17-19	19+
BI (Fuel Model X)	110+	5	5	4	4	3
	90-110	5	5	4	4	3
	65-90	4	4	3	3	2
	35-65	3	3	2	2	2
	0-35	2	2	1	1	1

Data from stations in this region:

WIMS ID	Station Name	Forecasted 100-hr FM	Forecasted BI	Max 24-Hr. Precip. (Dec 29 to Jan 11)
317501	Finch's Station	19.86	95.4	0.11
317801	Beaufort	21.11	65.7	1.22
319004	New Bern	19.05	83.2	1.20
319302	Turnbull Creek	20.52	106.0	0.25
319507	Hofmann Forest	19.55	94.0	0.66
319701	Whiteville	21.51	88.8	0.58
319803	Sunny Point	21.03	79.7	0.20
Average		20.38	87.5	0.60

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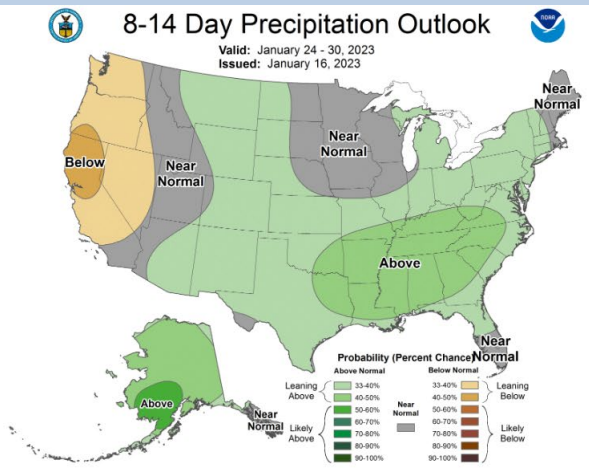
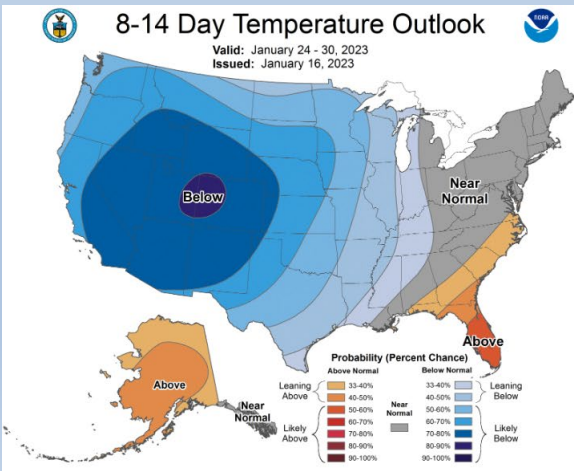
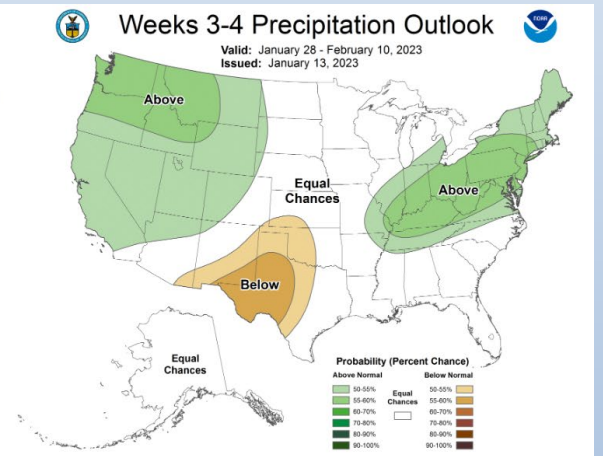
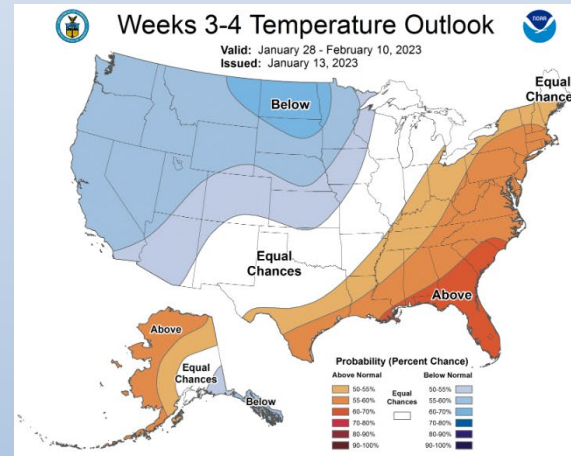
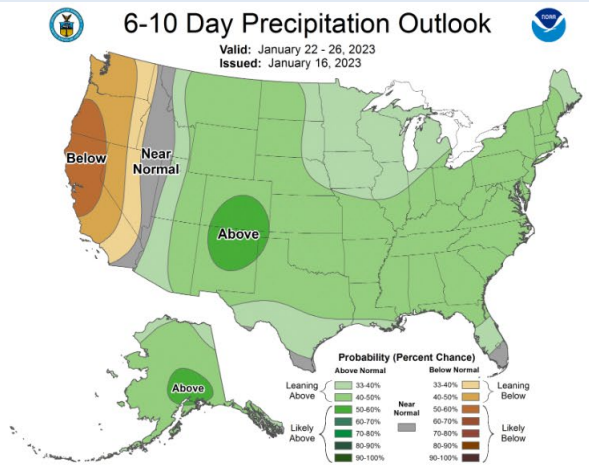
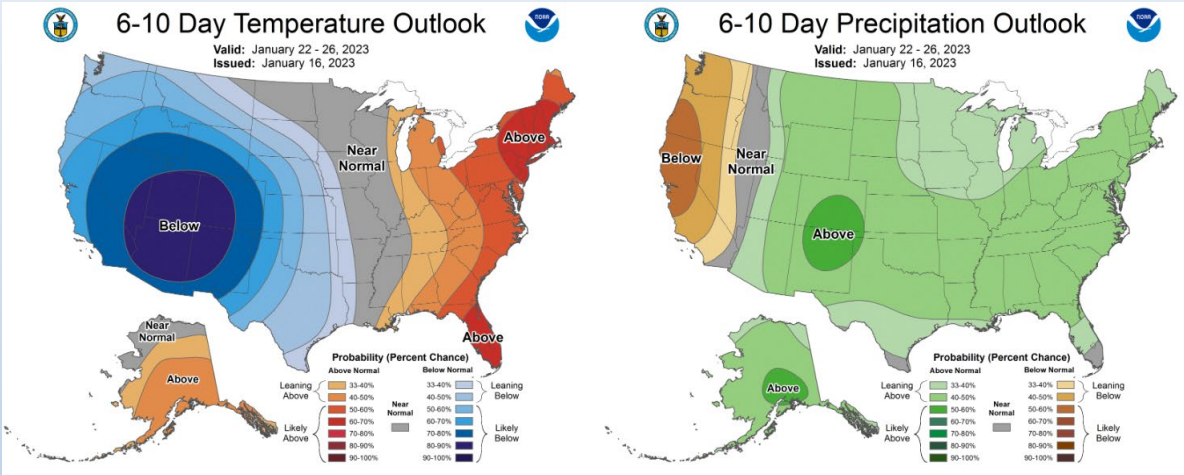
Spring Fire Outlook



Looking Ahead

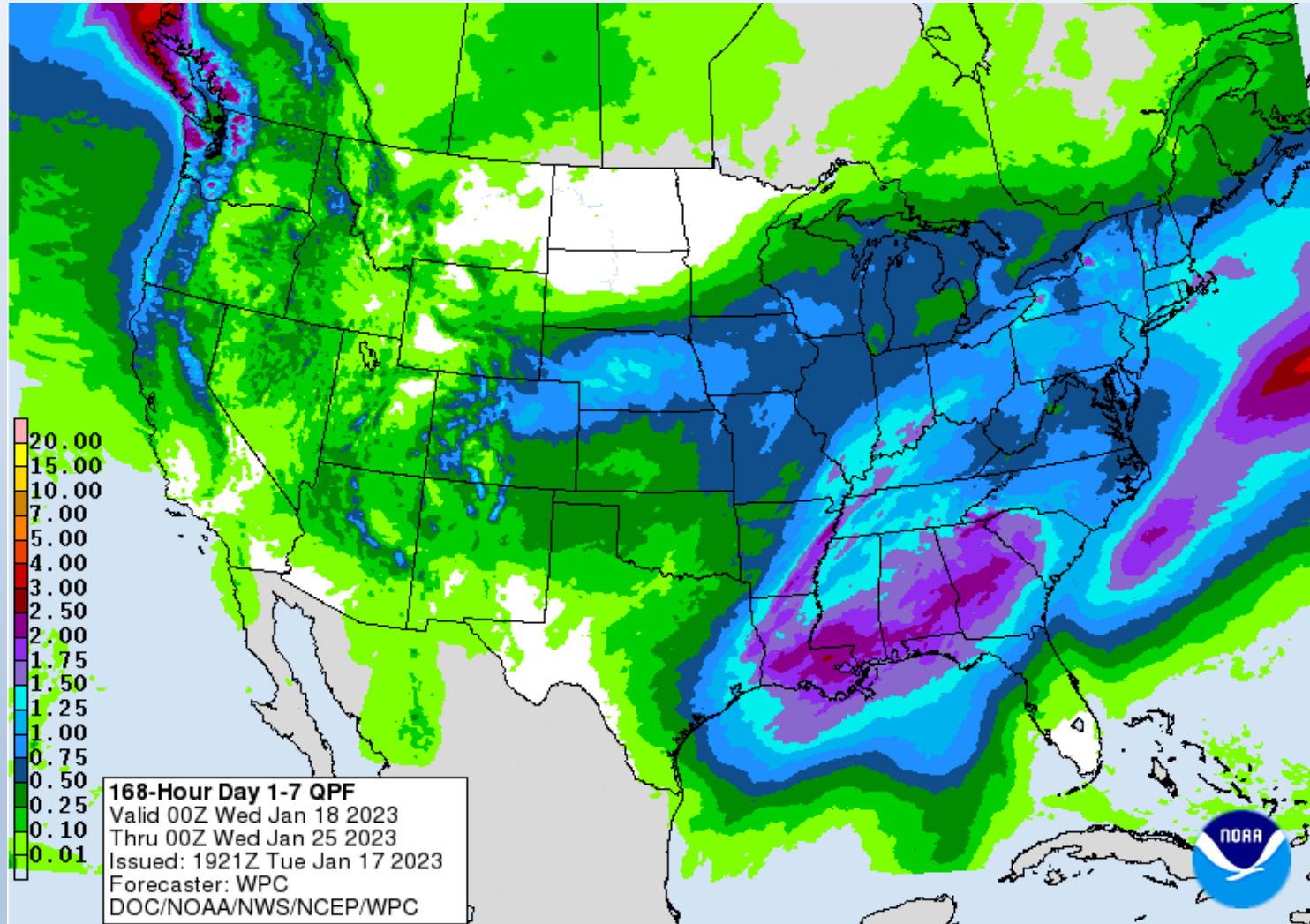


Spring Fire Outlook





Spring Fire Outlook



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

Day 1-7

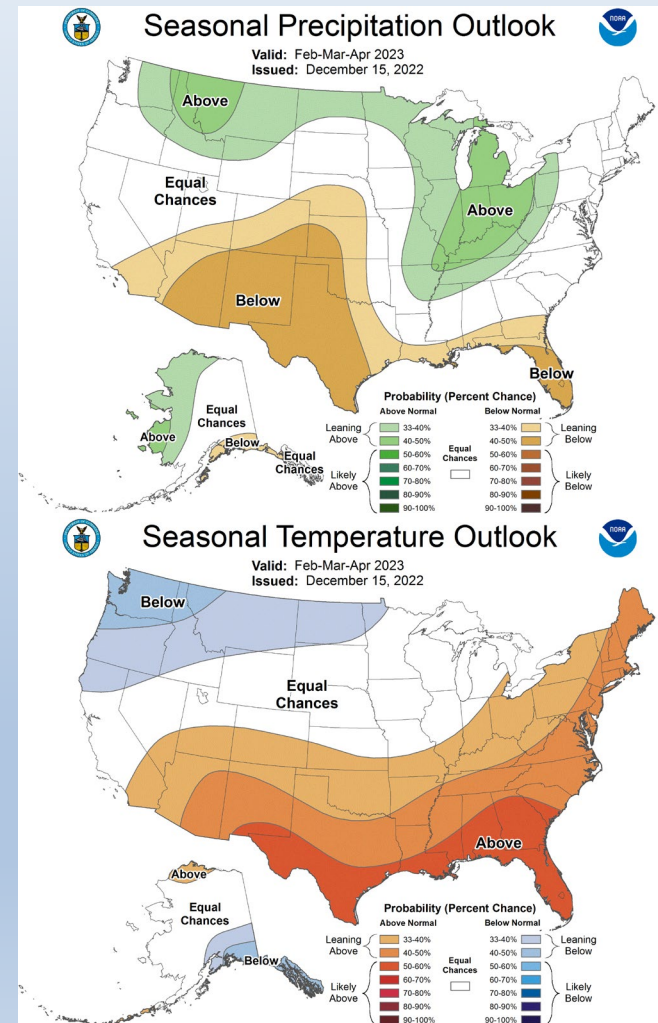
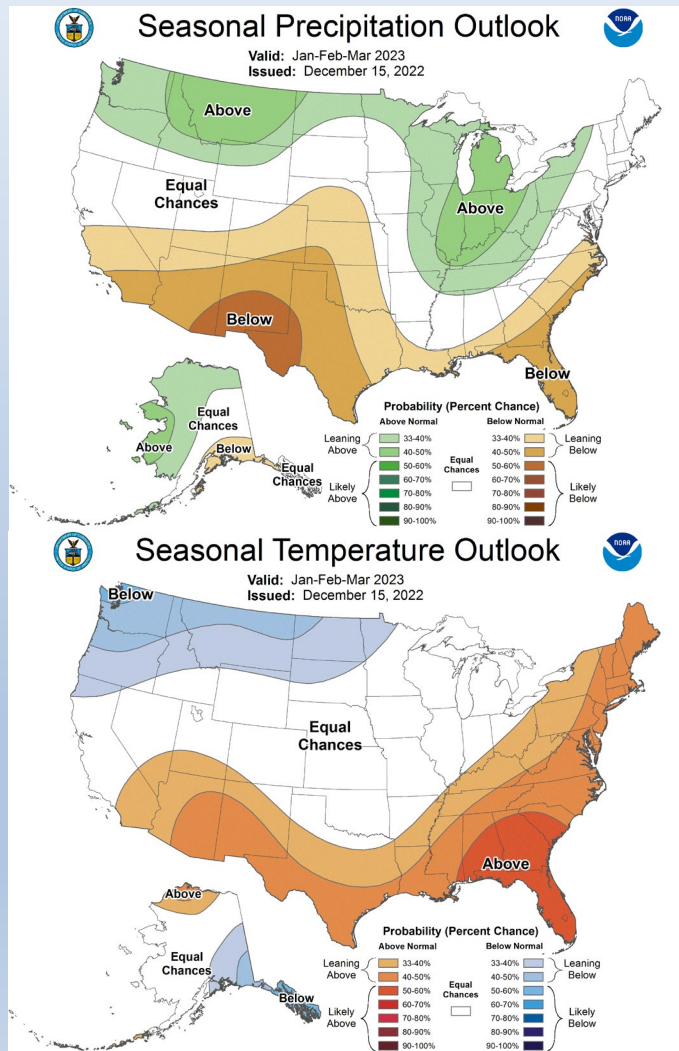


Spring Fire Outlook



Jan/Feb/Mar Outlook

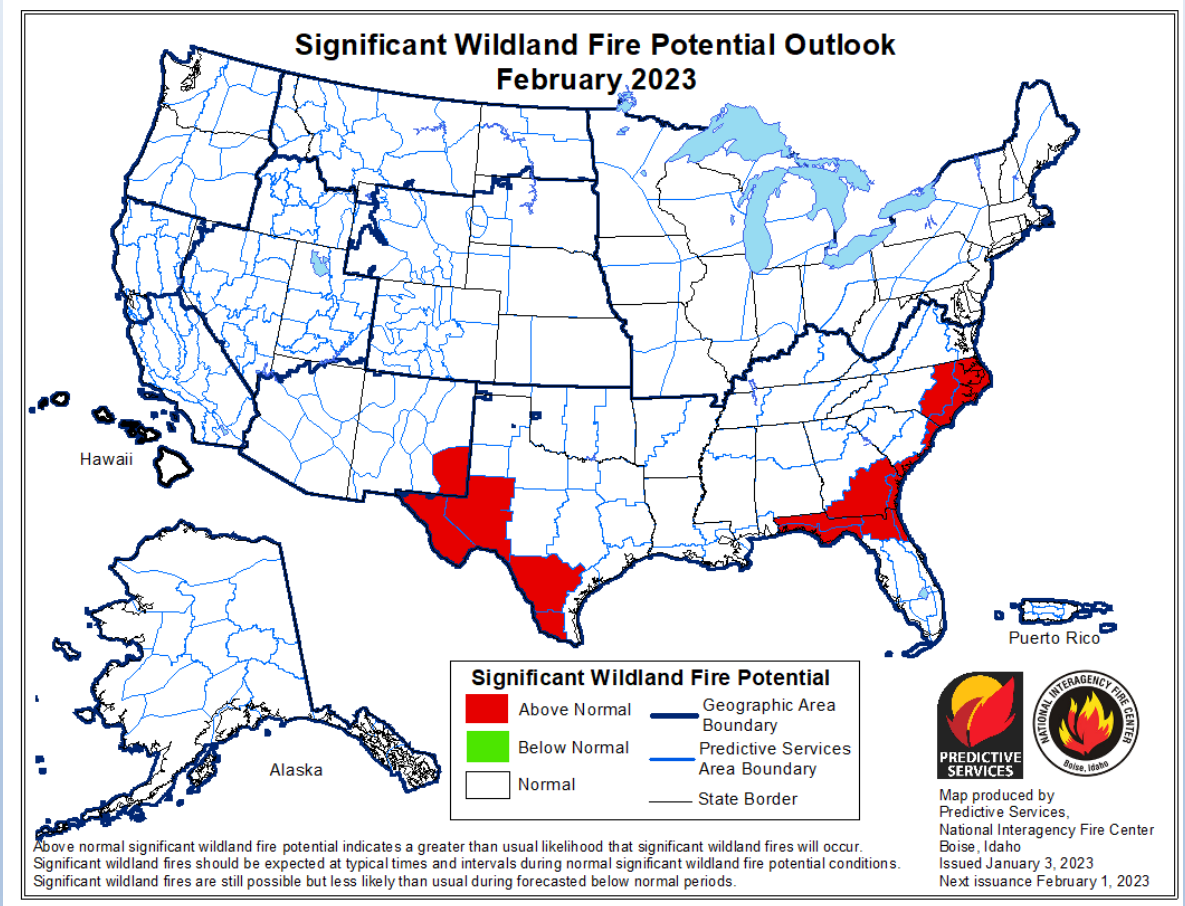
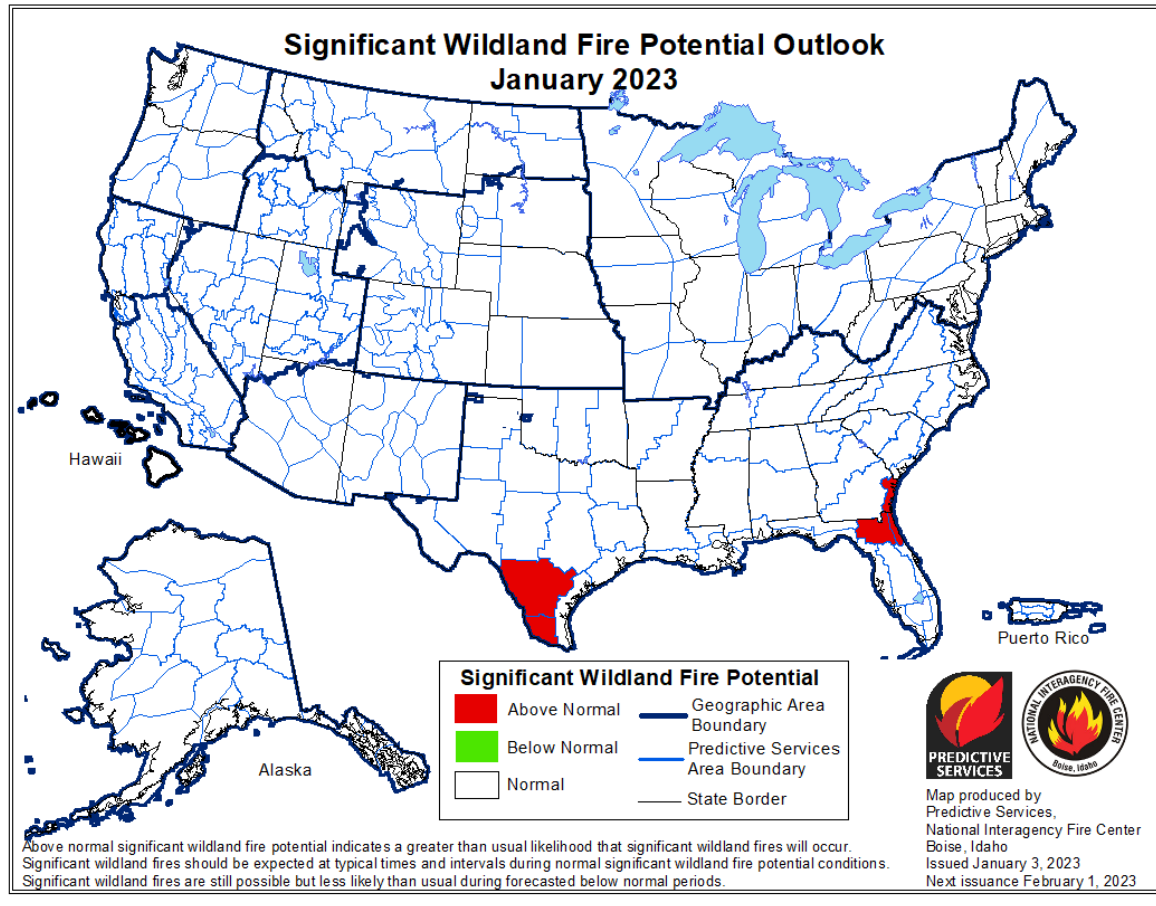
Feb/Mar/Apr Outlook



Refreshed Outlook
Coming on 1/19



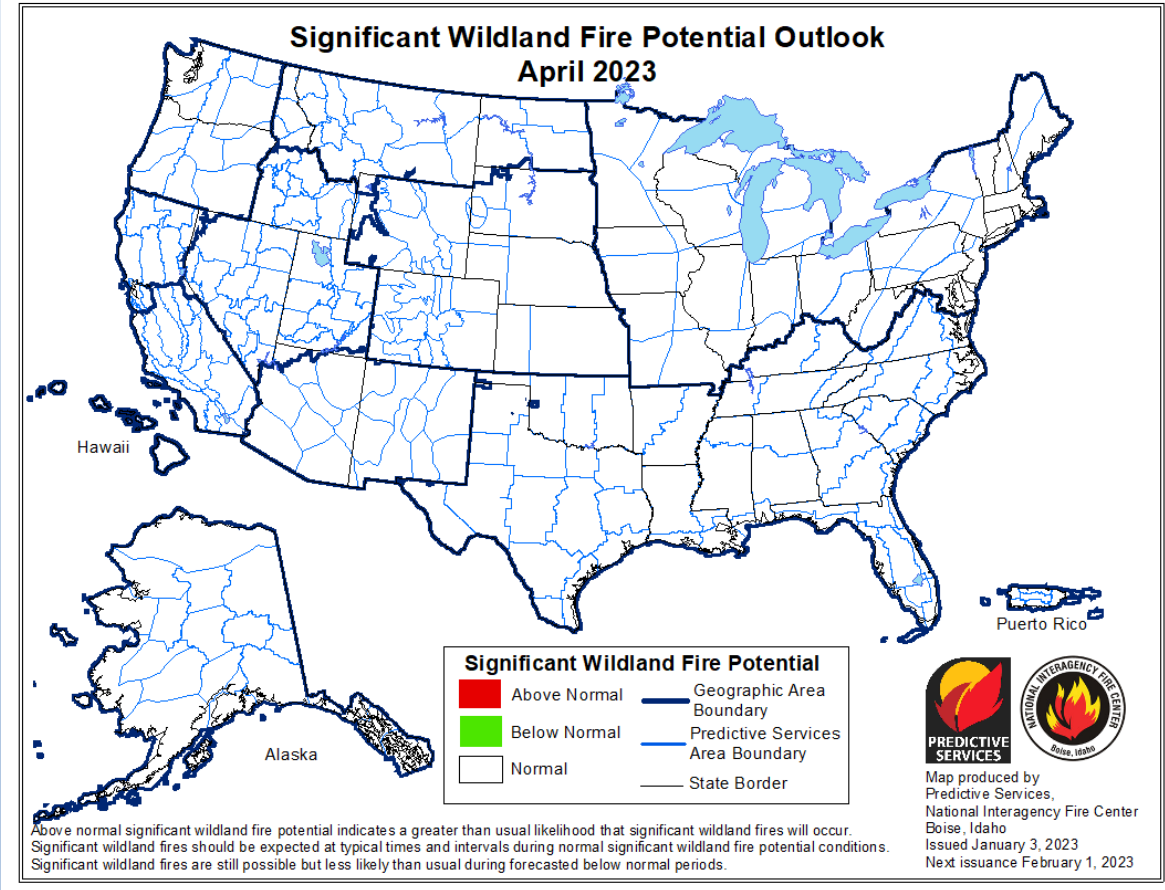
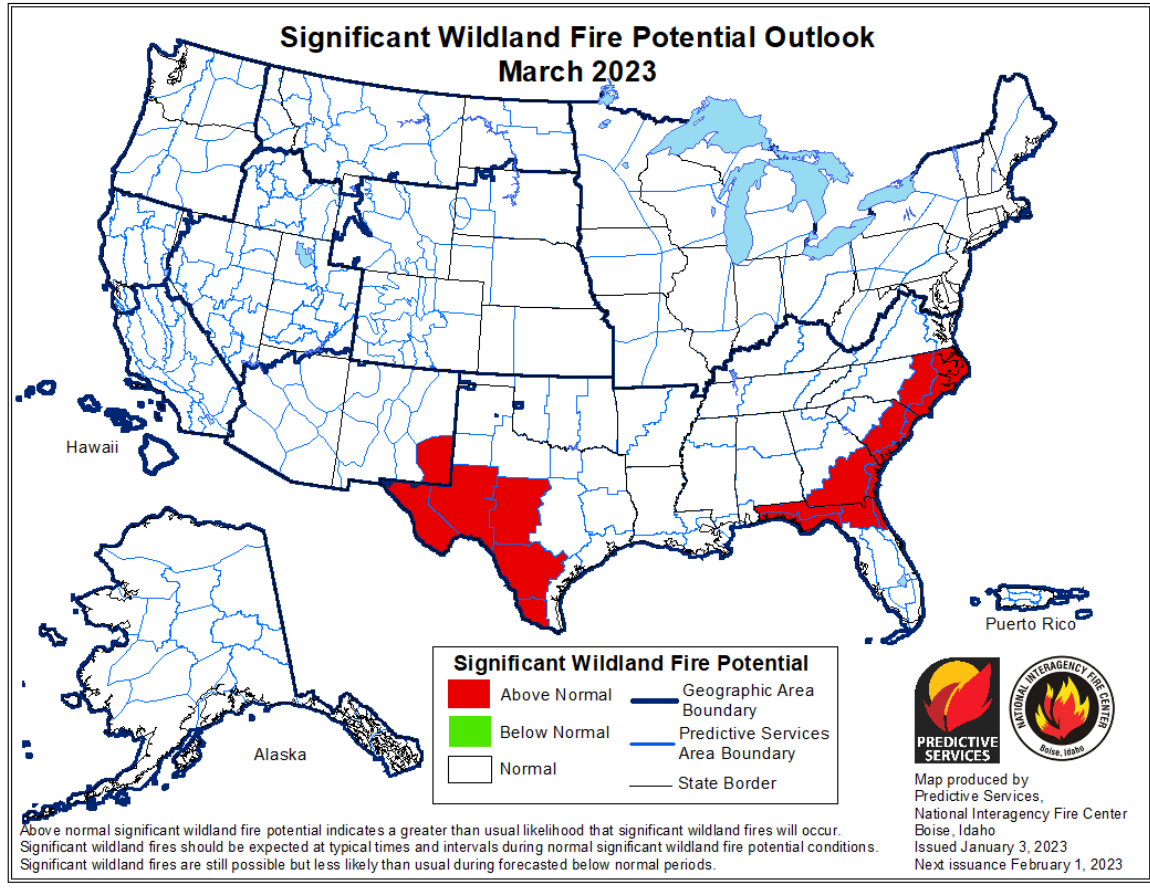
Spring Fire Outlook



Note: Significant fire potential is defined as the likelihood that a wildland fire event will require mobilization of additional resources from outside the area in which the fire situation originates.



Spring Fire Outlook



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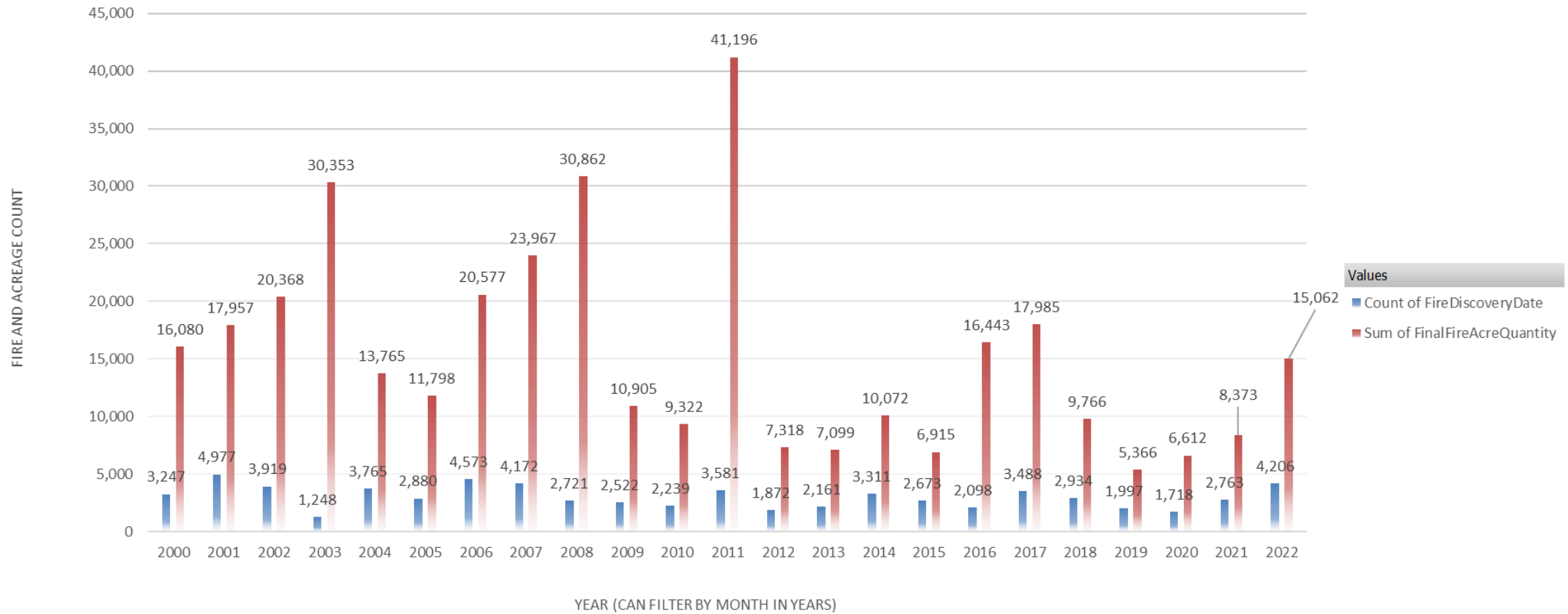
Spring Fire Outlook

Month ▾

STATEWIDE FIRE COUNTS & ACRES, 2000 - 2022 BY CY

(FIRE LISTED BY REPORTED START DATE, THIS CAN BE FILTERED BY MONTH)

JAN, FEB, MAR, APR, MAY ONLY



Year ▾

Extracted from FARS NASF Report. *2022 Values are Preliminary

JAN - MAY



Spring Fire Outlook



Statewide Summary

- Currently in La Nina and forecast to transition to Neutral into summer
- Warmer and drier is still favored to develop into Spring 23'
- A warmer February likely - speed bud break?
- Still chances for cold outbreaks, impacts to green-up?
- January - Normal Activity Favored
- February & March - Above Normal Activity Favored (See Graphical Outlook)
 - Timing of green-up and drying will determine fire danger into Feb and March.
- April, May, June - Too early to tell based on expert discussion
- Favorable Rx Burning conditions could quickly change based on precip/temp outlooks, especially for currently dry areas regarding IA Concerns and Mop-up Potential
- Heaviest moisture events may continue to track west, favoring Ohio River Valley area
- D0-D1 Drought, Expansion (Category/Extent) Likely as we warm up & move into Spring
- Seasonal Drought Outlook Map Signals are Mixed (Removal Noted on National Map)

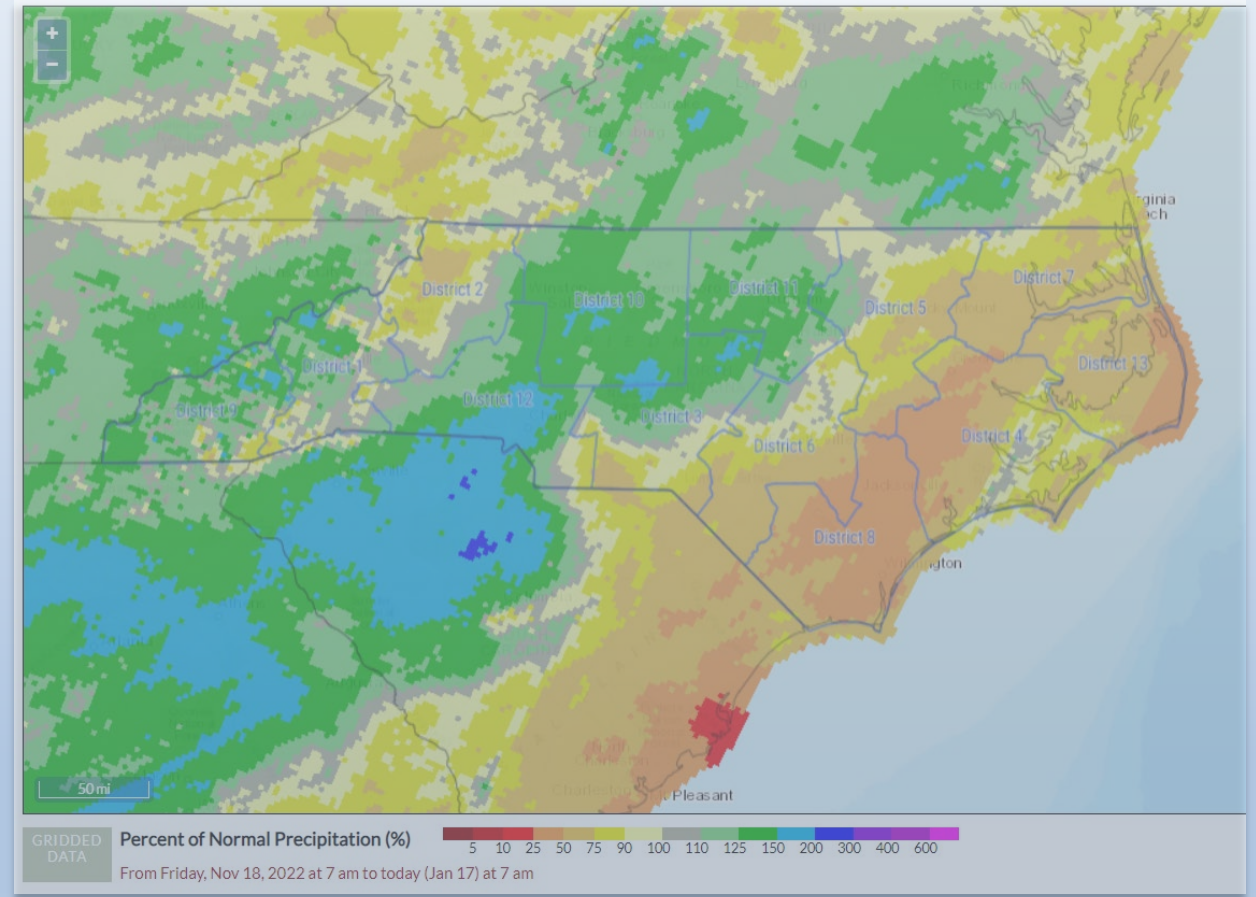


Spring Fire Outlook



Comments/Questions?

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*Note that Legacy Fuel Models will be removed +/- 1/31/23 by National NFDRS Folks in WIMS