

An aerial photograph of a wildfire in progress. The fire is a bright orange and yellow streak running diagonally across a dark, charred landscape. Several firefighters in orange gear are visible near the fire line. The background is a dark, smoky or ashy terrain.

# 2023 Wildfire Seasonal Outlook

**Scott Nielsen**  
**Durango Fire Protection District**

Ute Pass Fire May 2022



# 2023 Wildfire Season Outlook

## 2022 Summary

- Near Record Monsoon in the 4 Corners
- Upper and Lower Snow levels were above average
- Temperature across the area were above average



# 2023 Wildfire Season Outlook

## How Fire Spreads & Grows

- Topography
- Fuels
- Weather





# 2023 Wildfire Season Outlook

## Dead Fuels:

- 1 Hr 0- ¼”
- 10 Hr ¼” – 1”
- 100 Hr 1”-3”
- 1,000 Hr 3”-8”
- 10,000 Hr 8” +

FUEL MODEL Typical Fuel Complex	FUEL LOADING tons/acre				FUEL BED DEPTH in ft.
	1 Hr	10 Hr.	100 Hr.	Live	
<b>GRASS AND GRASS-DOMINATED</b>					
1-Short Grass (1 ft.)	0.74	0.00	0.00	0.00	1.0
2-Timber (Grass and Understory)	2.00	1.00	0.50	0.50	1.0
3-Tall Grass (2.5 ft.)	3.01	0.00	0.00	0.00	-
<b>CHAPARRAL AND SHRUB FIELDS</b>					
4-Chaparral (6 ft.)	5.01	4.01	2.00	5.01	6.0
5-Brush (2 ft.)	1.00	0.50	0.00	2.00	2.0
6-Dormant Shrub & Hdwd. Slash	1.50	2.50	2.00	0.00	2.5
7-Southern Rough	1.13	1.87	1.50	0.37	2.5
<b>TIMBER LITTER</b>					
8-Closed Timber Litter	1.50	1.00	2.50	0.00	0.2
9-Hardwood Litter	2.92	0.41	0.15	0.00	0.2
10-Timber (Litter and Understory)	3.01	2.00	5.01	2.00	1.0
<b>SLASH</b>					
11-Light Logging Slash	1.50	4.51	5.51	0.00	1.0
12-Medium Logging Slash	4.01	14.03	16.53	0.00	2.3
13-Heavy Logging Slash	7.01	23.04	28.05	0.00	3.0



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**Middle Mountain, elevation 8200 ft, 37 27' 08.3" X 107 32' 18.7"**

<b>Live FM AVG</b>	<b>%</b>	<b>Dead FM AVG</b>	<b>%</b>	<b>On Site Wx Obs</b>				
<b>Ponderosa</b>	<b>110</b>		<b>1000 Hour</b>	<b>8</b>	<b>Dry Blb</b>	<b>75</b>	<b>%CC</b>	<b>10%</b>
<b>Gamble Oak</b>	<b>#####</b>		<b>100 Hour</b>	<b>6</b>	<b>Wet Blb</b>	<b>46</b>	<b>WS</b>	<b>1-6</b>
<b>White Fir</b>	<b>115</b>				<b>Dew Pt</b>	<b>11</b>	<b>DIR</b>	<b>SW</b>
<b>Perennial Grass</b>	<b>#####</b>				<b>RH</b>	<b>9</b>	<b>10hr</b>	<b>5%</b>



# 2023 Wildfire Season Outlook



## Durango Dispatch Fire Business Calculator - 2023 DRC LOWER Fire Danger Rating Area - Forecast Weather & NFDRSv4 Fire Danger



Predicted Indices 5/16/2023 8:14

Stations: Nucla (053805), Chapin (055704), Mockingbird (055710), Mesa Mountain (055805)

	May 16	May 17	May 18	May 19	May 20	May 21	May 22
Max Temp (F)	76	77	77	76	76	76	77
Minimum RH (%)	26	23	26	28	27	29	29
Max Dewpoint (F)	47	43	47	46	47	46	46
Min Temp (F)	46	48	50	48	50	51	51
Max RH (%)	74	62	71	70	72	71	69
Windspeed (20'-mph)	10	10	13	12	12	11	12
Wind Direction (deg)	311	284	270	297	243	248	230
Wind Direction	NW	W	W	WNW	WSW	WSW	SW
Lightning Activity Level	3	2	4	4	3	4	4
1-hr(%)	9.8	8.9	9.6	9.7	9.9	9.8	9.6
10-hr (%)	12.7	11.3	12.4	12.3	12.6	12.5	12.2
100-hr (%)	13.8	13.4	13.0	12.8	12.8	13.0	13.4
1000-hr(%)	11.6	11.8	12.2	12.8	12.8	12.8	12.8
ERC-X Percentile	13	17	13	12	12	12	13
BI-X Percentile	25	28	28	26	25	25	26
Staffing Level	1	1	1	1	1	1	1
Response Level	1	2	1	1	1	1	1
Adjective Fire Danger	Low	Low	Low	Low	Low	Low	Low
Recommended Fire Restrictions	None	None	None	None	None	None	None
Severe Fire Danger Index	Low	Low	Low	Low	Low	Low	Low
FWZ 207 Fuels Critical?	No	No	No	No	No	No	No
FWZ 207 Red Flag Likely?	No	No	No	No	No	No	No



# 2023 Wildfire Season Outlook



## Durango Interagency Dispatch Center

### Fire Danger Pocket Card for:

### Fuel Model X - Brush

**5/5/2023**

**Predicted**

All DRC NFDRS calculations are displayed as percentiles, not as raw values. A percentile simply shows how frequently a value occurs, which is shown as being between 0 and 100. A 50th percentile value occurs exactly in the midpoint of a range, a 97th percentile value means only 3% of all days have had a higher value. Windspeed, relative humidity, and maximum temperature are all absolute values - the ones shown here are what you would measure in the field.

**Lower FDRA Local (Critical) Thresholds & Forecasts:** A number of firefighter entrapments and near misses have occurred in this FDRA due to the light, flashy nature of the fuels. Slight changes in wind speed or direction can cause significant changes in fire behavior. Any of the factors shown below can significantly increase the risk for extreme fire behavior. The more factors present, the greater the risk (Orange highlighted fields in forecast days below).

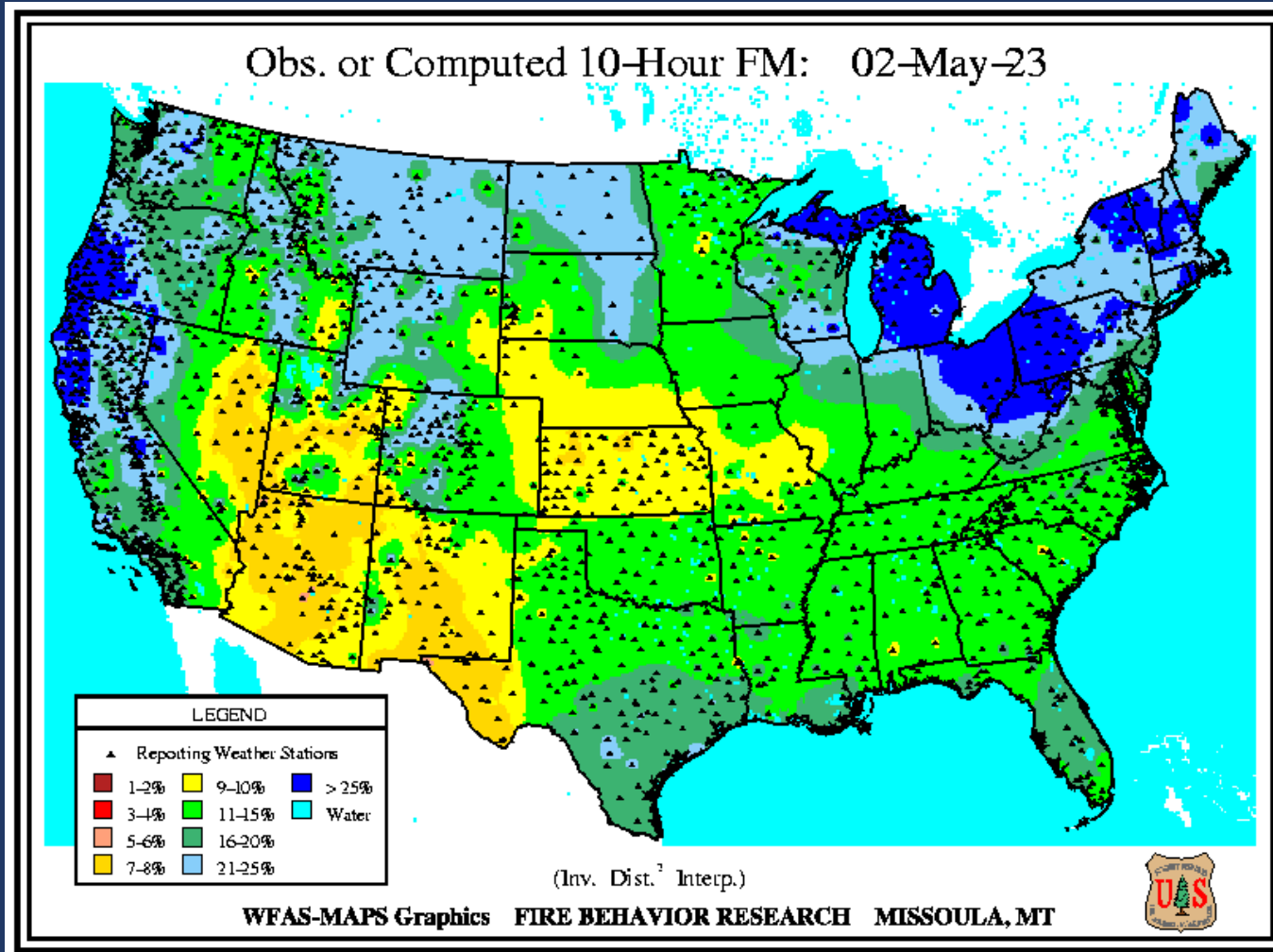
Indicator	Critical Value	5/5	5/6	5/7	5/8	5/9	5/10	5/11
20-ft wind (mph)	9	18	20	17	15	17	20	17
Min. RH (%)	9	14	16	14	14	11	9	9
Max. Temp (°F)	84	70	65	67	71	74	77	78
100+ ac. ERC-X	80	48	36	44	44	58	68	54
100+ ac. BI-X	84	77	73	73	67	79	87	77
<b>Severe Fire Danger Index (wfas.net)</b>		Low	Low	Low	Low	Low	Moderate	Low

### Lower FDRA Memorable Fire Single Day Events

Fire	Date	Size (ac.)	ERC	BI	RH (%)	Temp (°F)	20' wind	SFDI
East Canyon	6/14/2020	2,568	83	95	7	86	13	High
<i>Aggressive fire behavior threatened WUI and US 160 on the first burn period</i>								
Horse Park	5/26/2018	1,221	85	92	4	84	13	High
<i>Several near misses occurred on a drought year Pinyon-Juniper fire</i>								
Toe	8/6/2015	369	54	52	11	90	9	Low
<i>Wind and slope align in an otherwise cool and wet year</i>								



# 2023 Wildfire Season Outlook

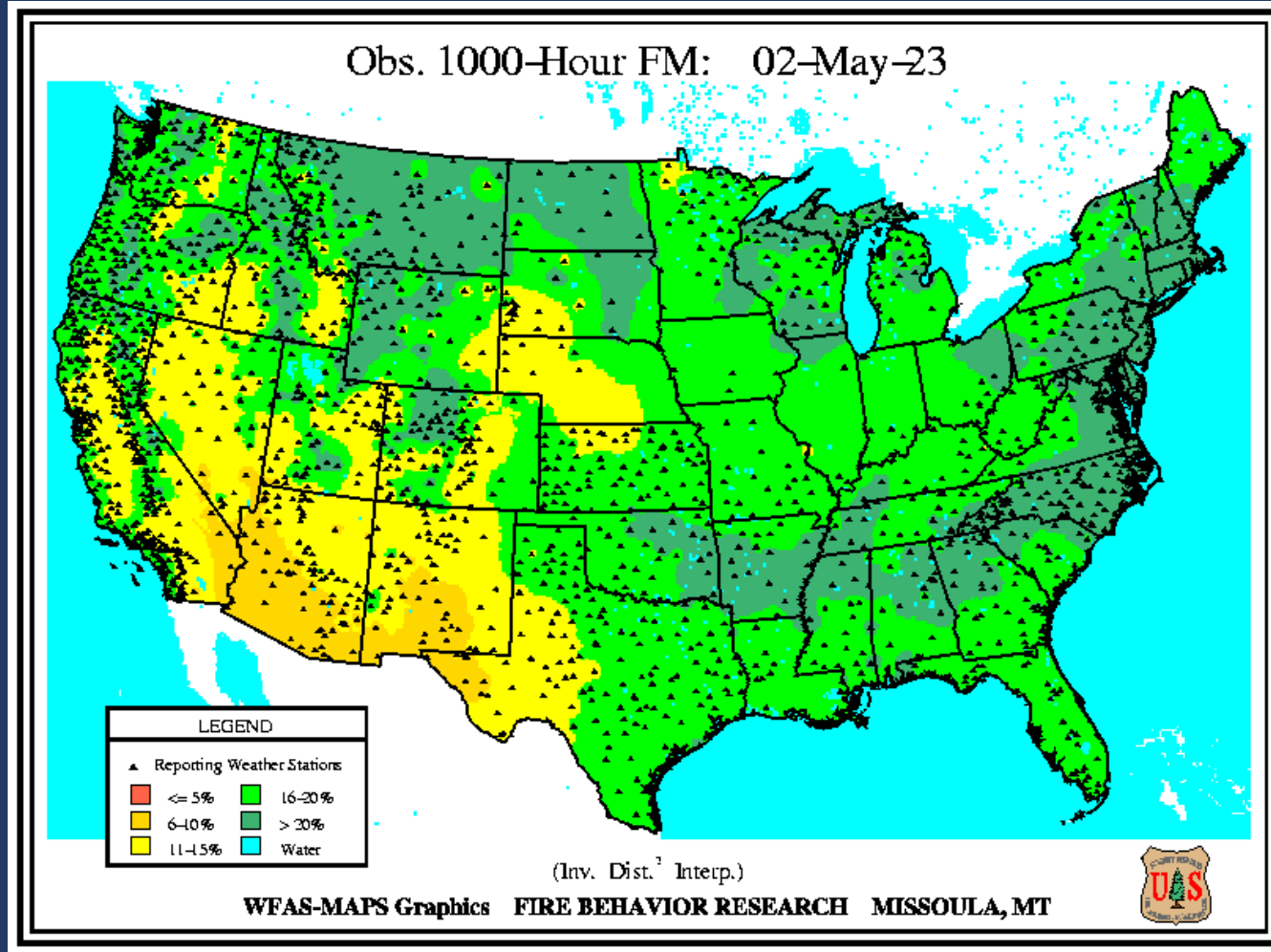


<http://wfas.net/index.php/dead-fuel-moisture-moisture--drought-38>





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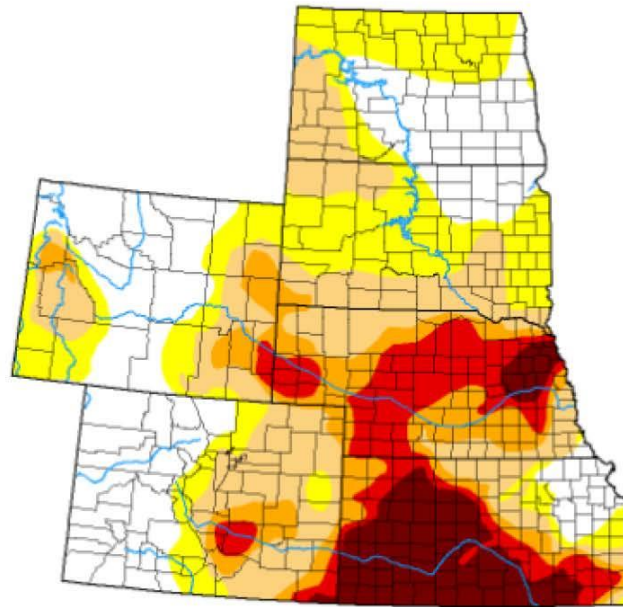
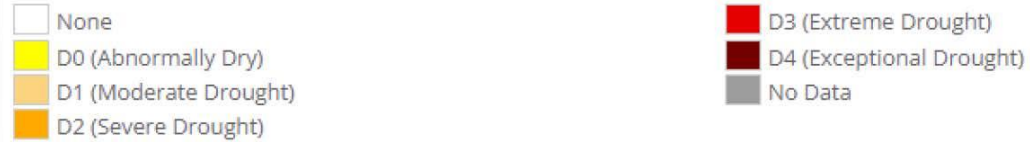
<http://wfas.net/index.php/dead-fuel-moisture-moisture--drought-38>



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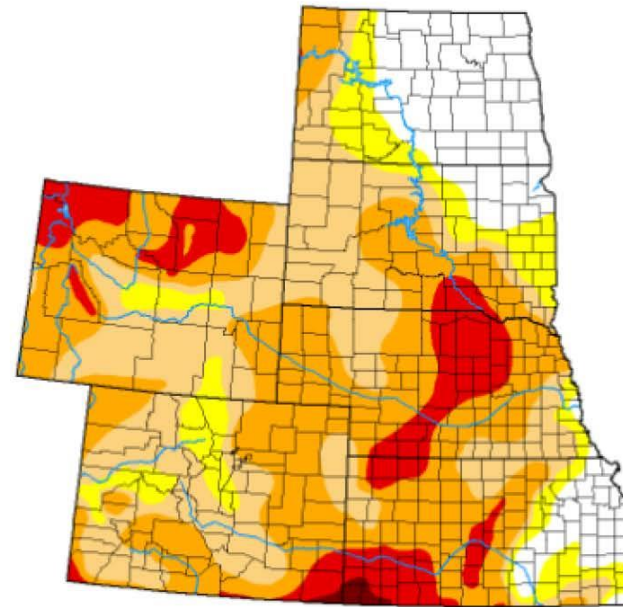
## Drought Classification

## 1-Year Comparison



Now

< April 25, 2023 >



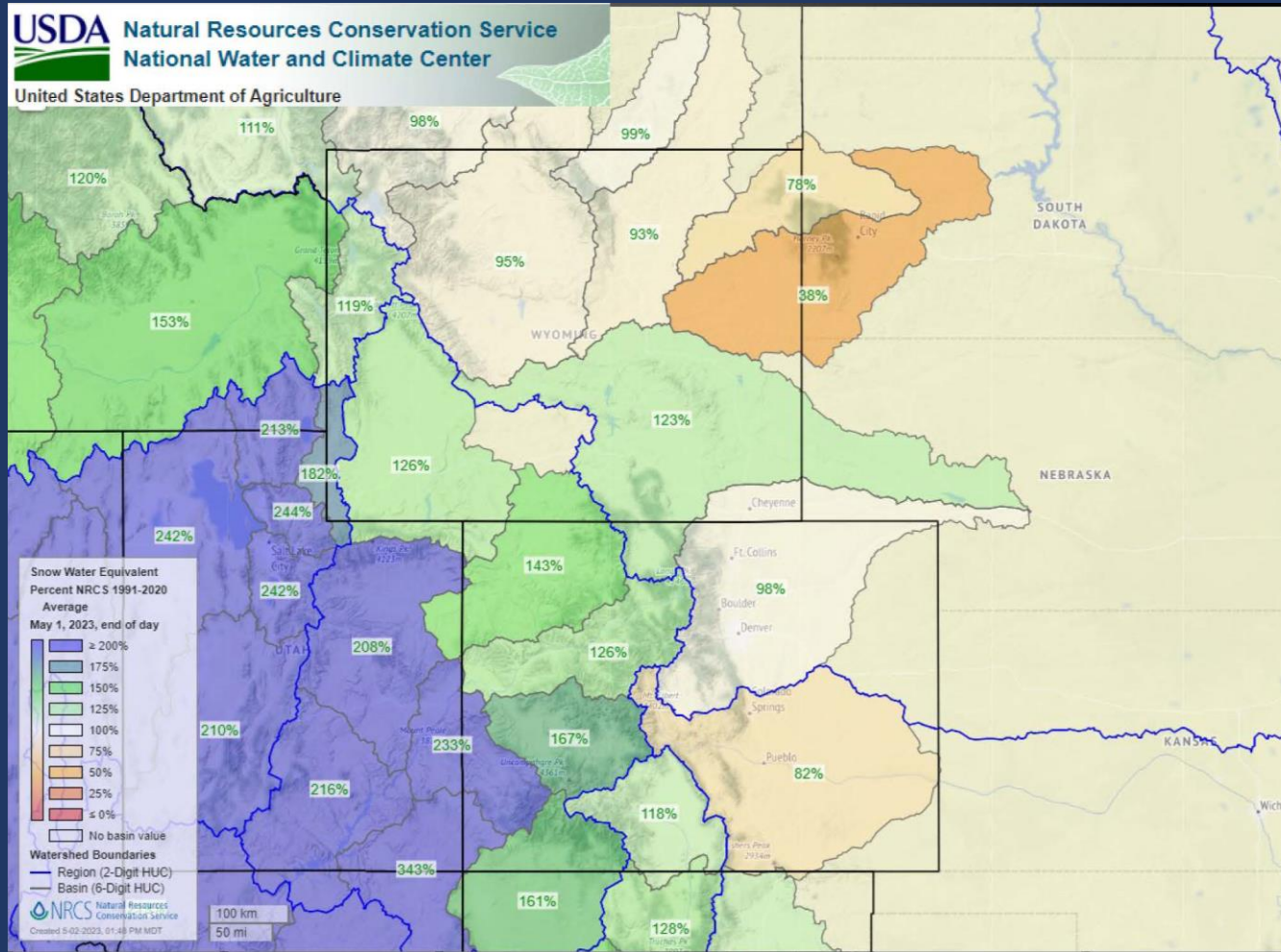
1 year ago

< April 26, 2022 >

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



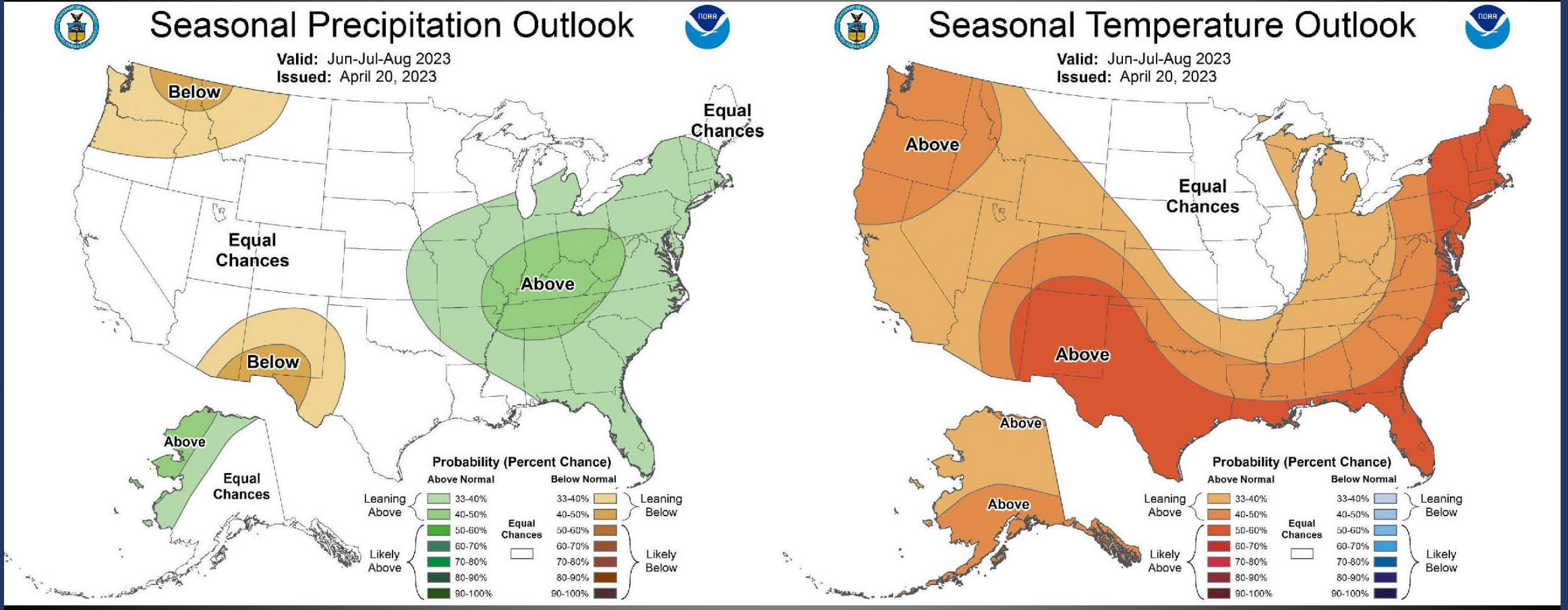
# 2023 Wildfire Season Outlook



<https://www.nrcs.usda.gov/resources/data-and-reports/snow-and-climate-monitoring-predefined-reports-and-maps>



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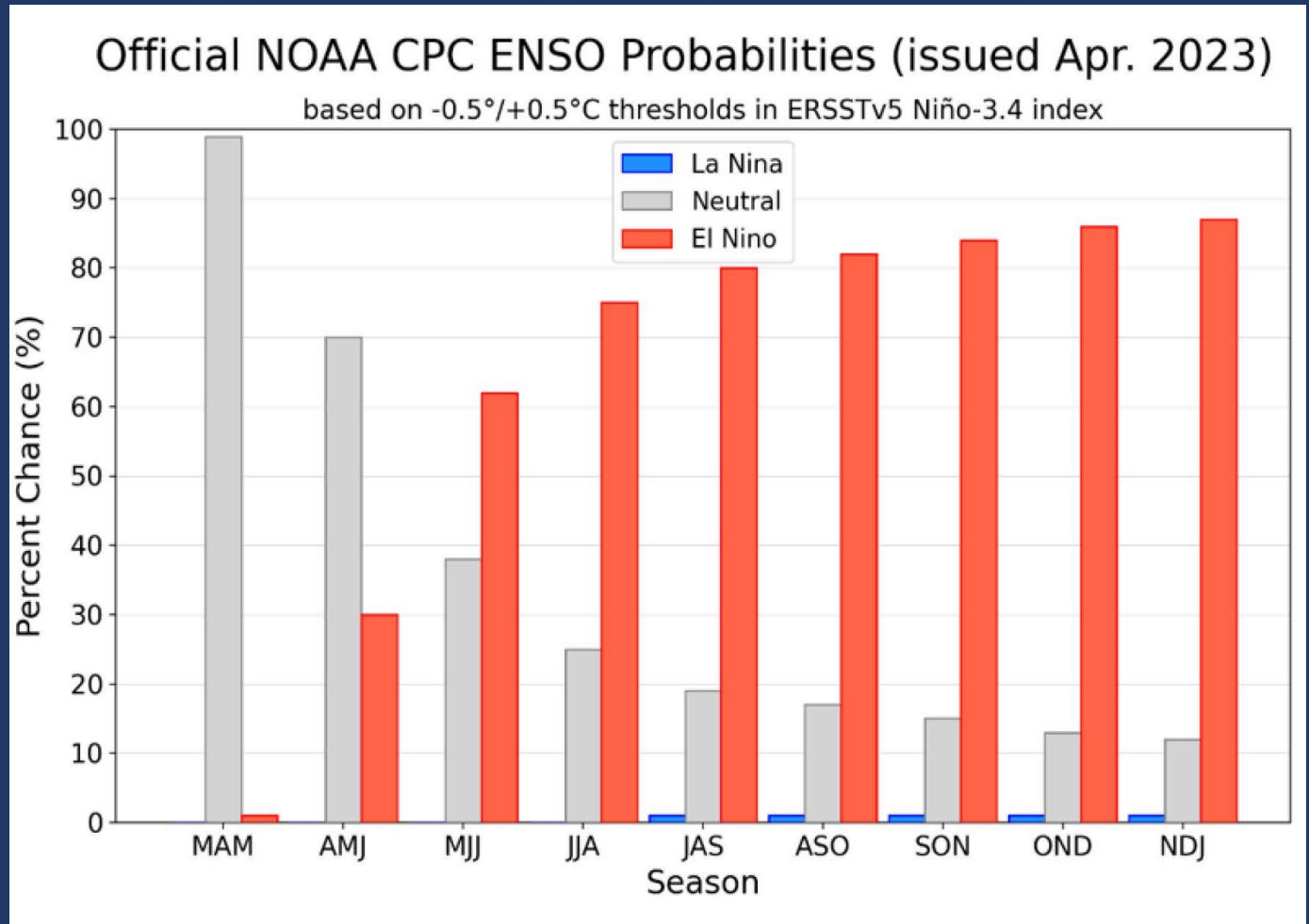




# 2023 Wildfire Season Outlook

Very Good chance  
of El Nino for 2023

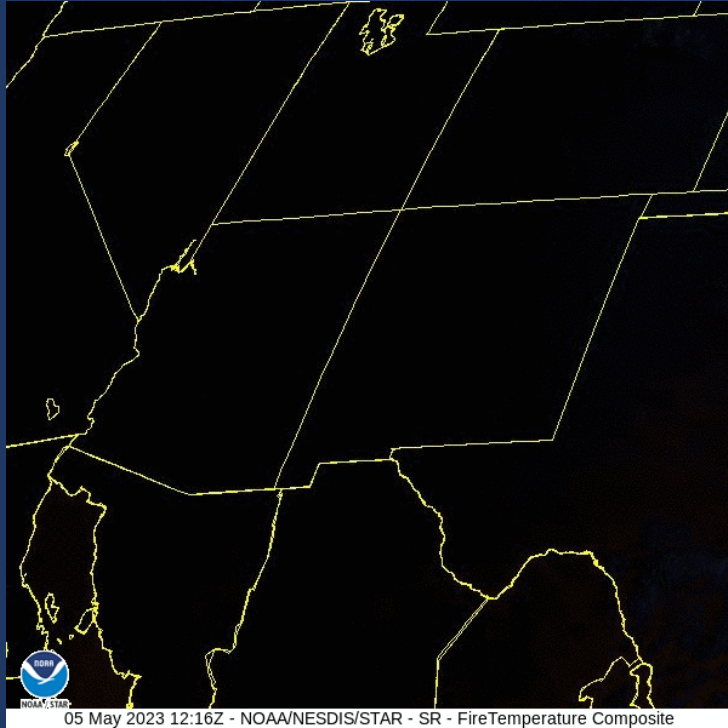
Potential late but  
'normal' monsoons  
for 2023



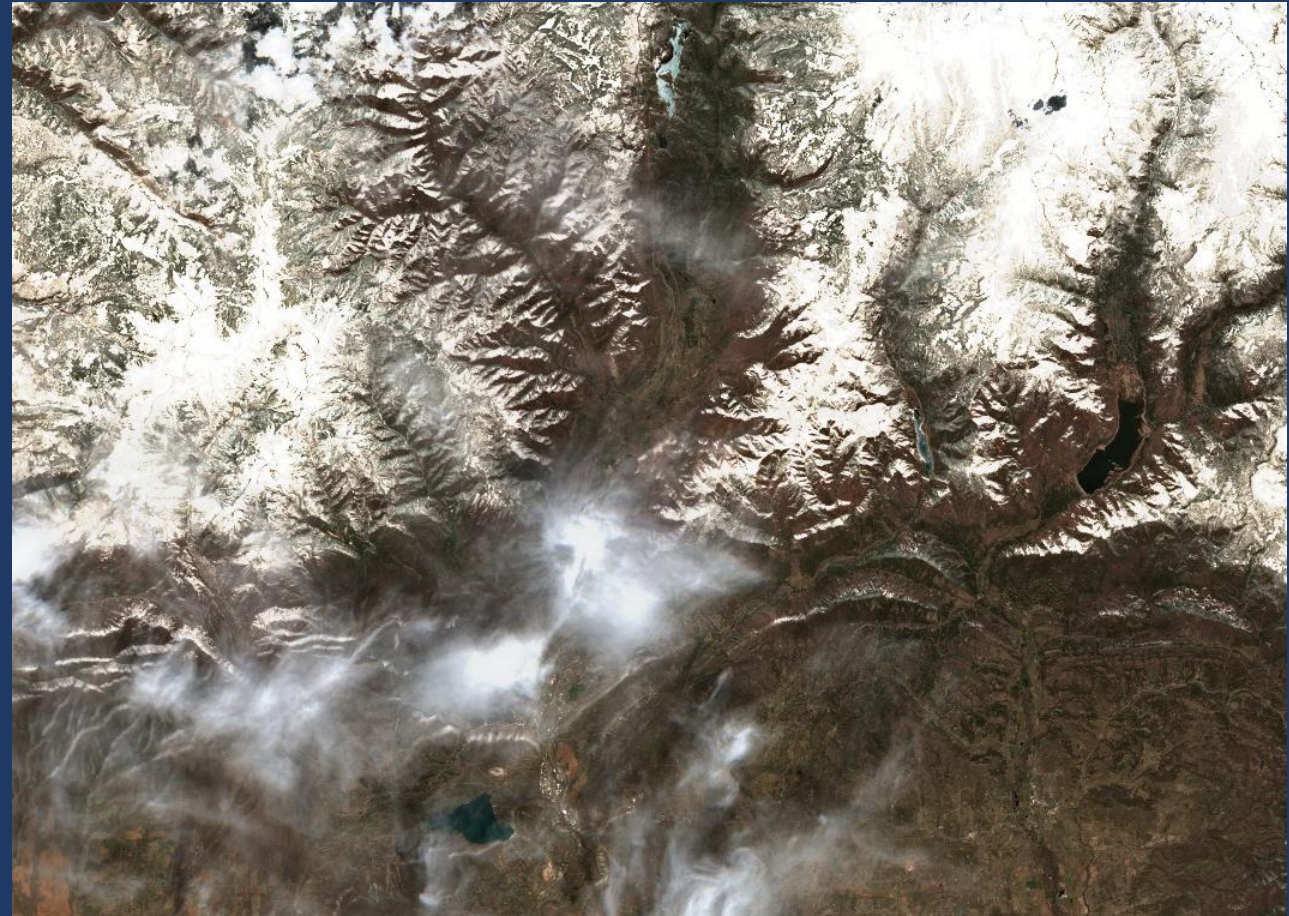




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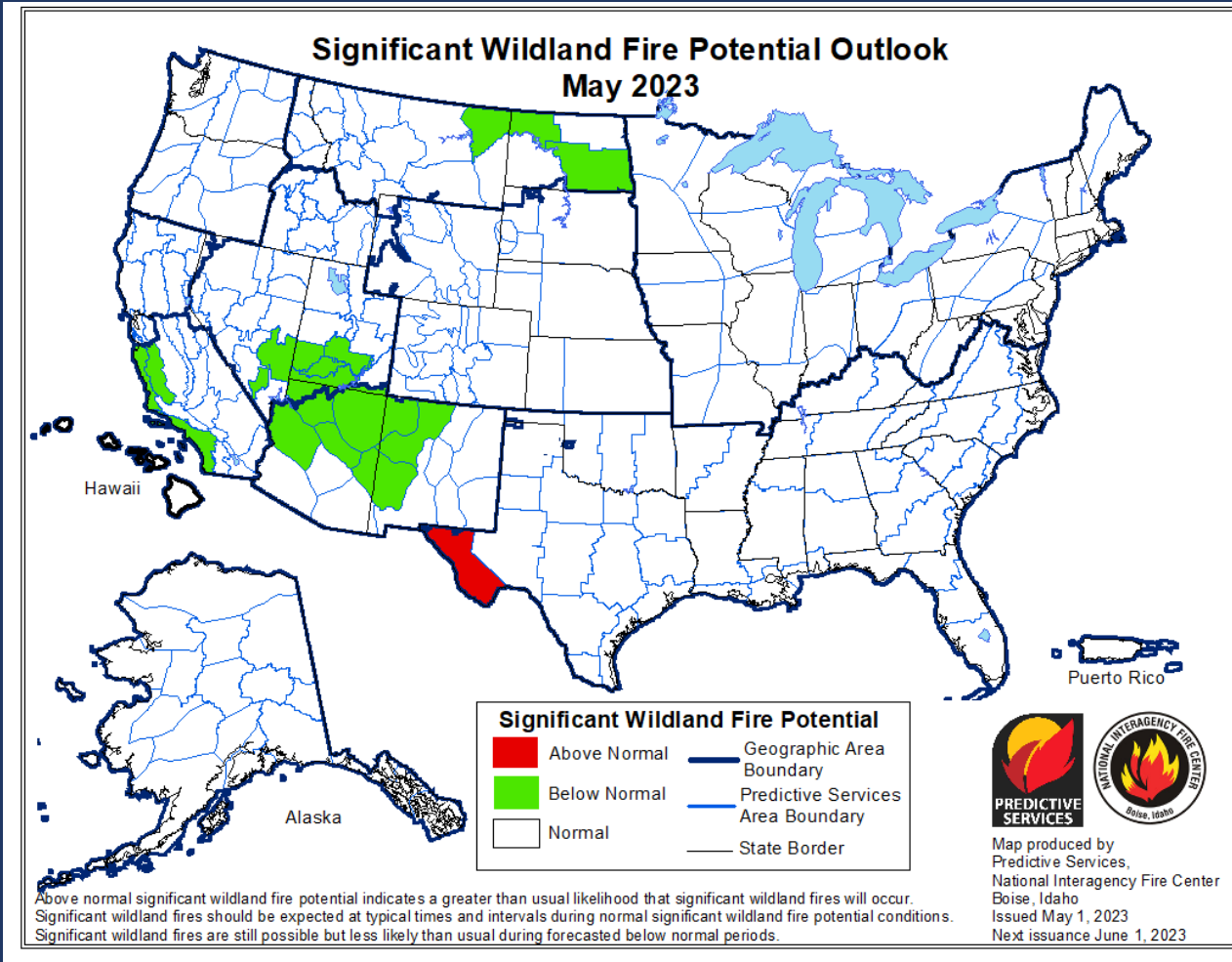
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[https://cdn.star.nesdis.noaa.gov/GOES16/ABI/SECTOR/nr/GEOCOLOR/20231382226\\_GOES16-ABI-nr-GEOCOLOR-2400x2400.jpg](https://cdn.star.nesdis.noaa.gov/GOES16/ABI/SECTOR/nr/GEOCOLOR/20231382226_GOES16-ABI-nr-GEOCOLOR-2400x2400.jpg)



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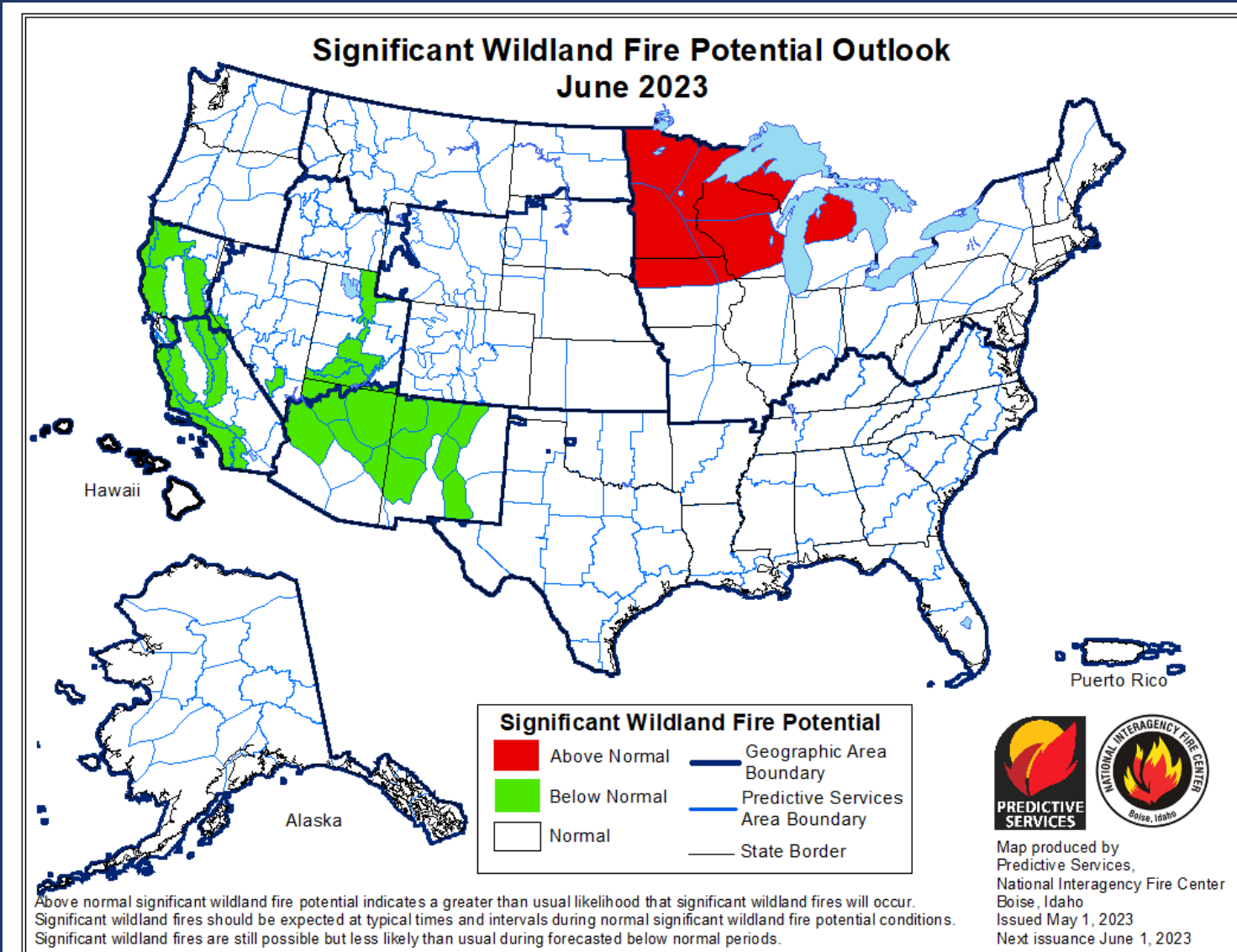


<https://www.predictiveservices.nifc.gov/outlooks/outlooks.htm>



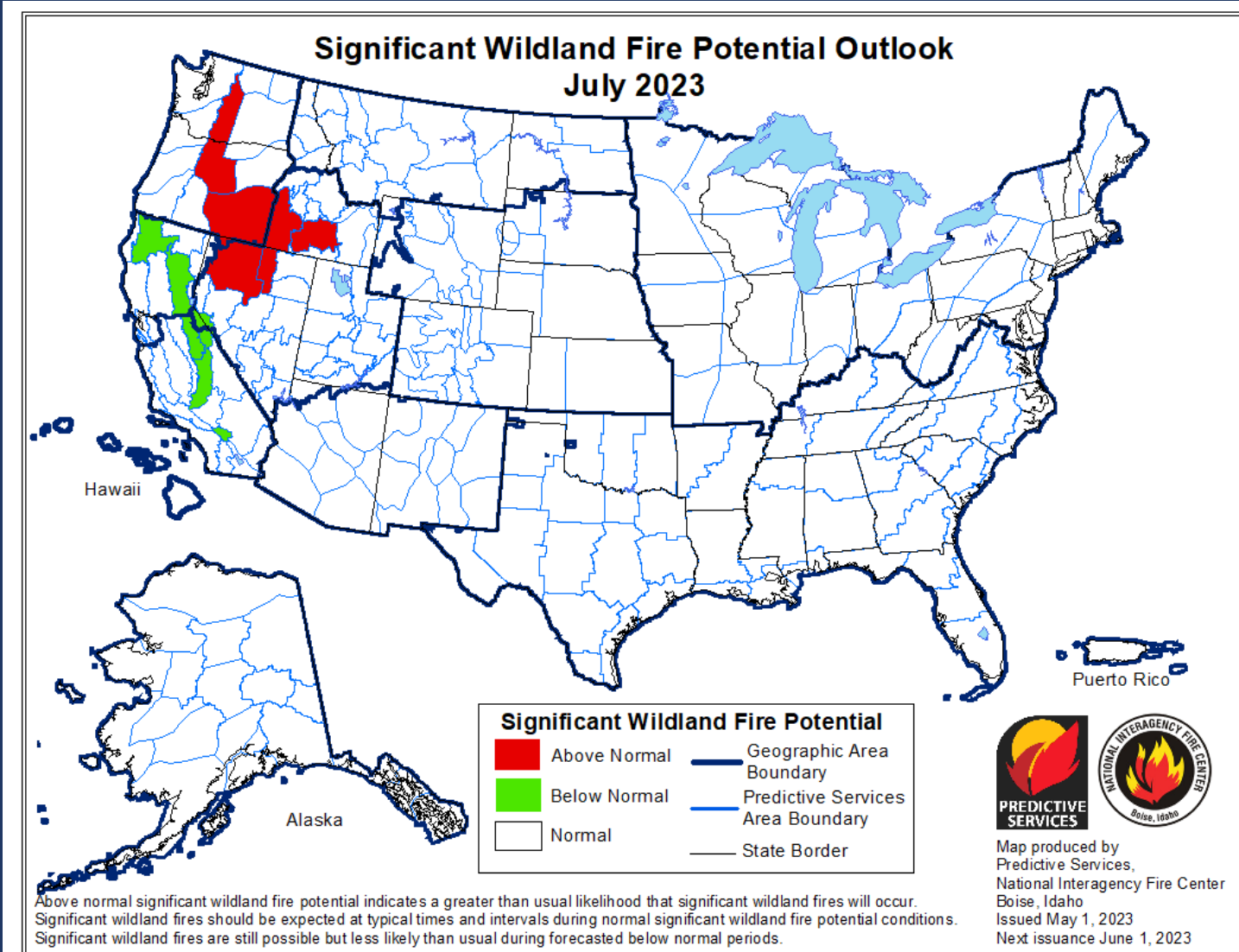


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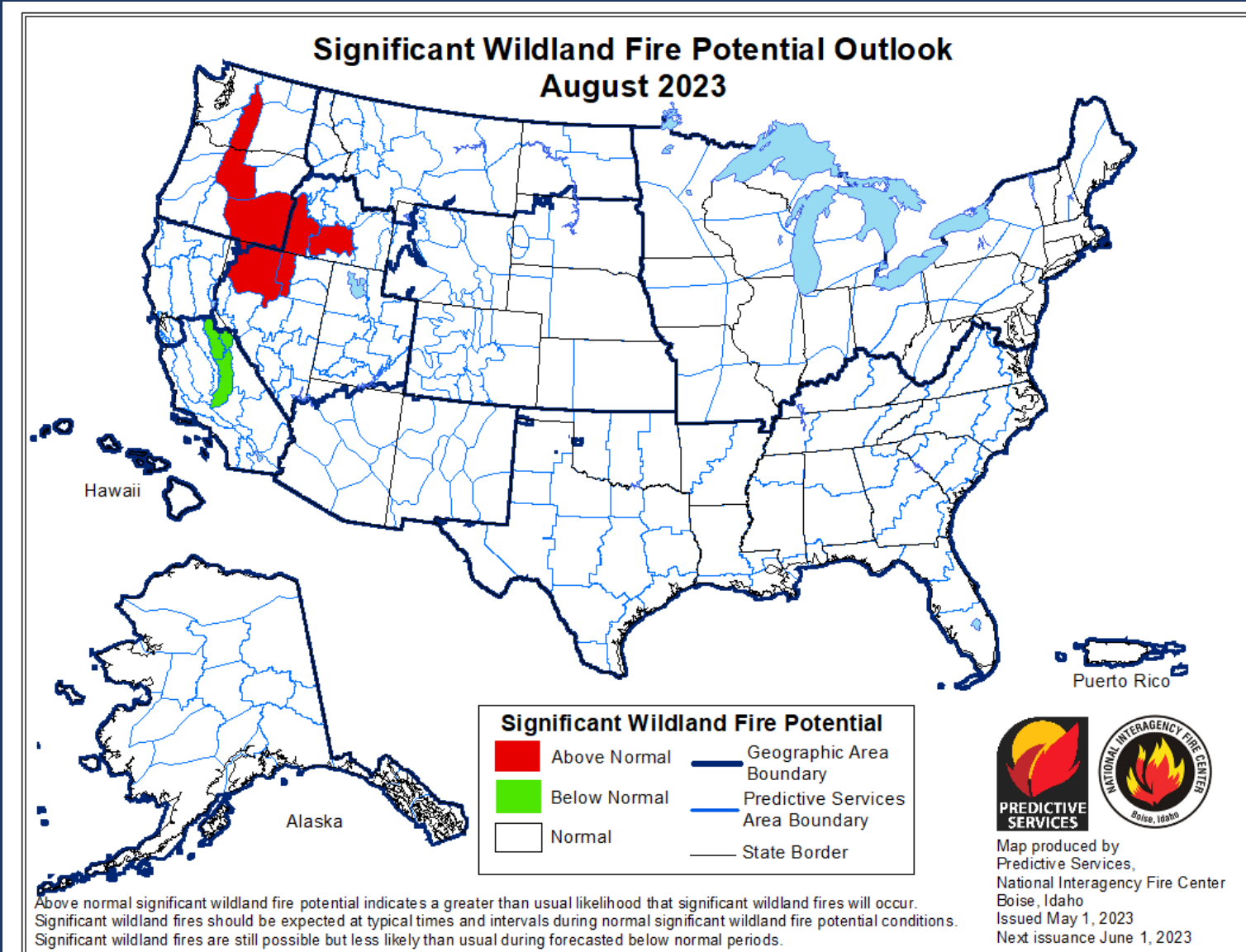


# 2023 Wildfire Season Outlook





# 2023 Wildfire Season Outlook





# 2023 Wildfire Season Outlook

## 911 Dispatch Center

Non emergency # (970-385-2900)

- Fire Departments
- Law enforcement

## Interagency Dispatch Center (970-385-1324)

- Fires on Federal Lands



Ned Daly – 2021



# 2023 Wildfire Season Outlook



Helpful information for dispatch:

- Location
- Color of smoke
- Flames visible
- Potential cause
- Proximity to homes
- Callback number and info



# 2023 Wildfire Season Outlook

911 is quickest way to get firefighter response!

- Firefighters will determine ownership as needed and work to suppress fire regardless of ownership
- LPC Mutual Aid agreements allow interagency collaboration





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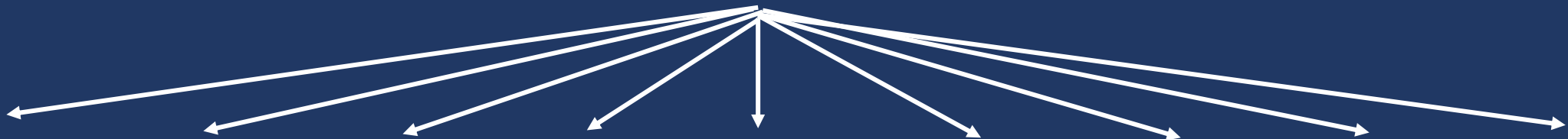
Durango Interagency Dispatch



Rocky Mountain Coordination Center (Lakewood, CO)



National Interagency Coordination Center (Boise, ID)



GBCC	SWCC	NRCC	NWCC	SACC	NWCC	NOCC	SOCC	AKCC
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[National Interagency Fire Center](#)



# 2023 Wildfire Season Outlook



## DFPD Wildfire Division

- 4 Full time employees
- 18 seasonal employees
- 8 IMT members

## DFPD Daily Staffing

- Approx 26 firefighters 24/7

<https://durangofire.org/wildland-fire/>





# 2023 Wildfire Season Outlook

- WIIN Grant
- CO-SWAP
- 13 Million in funding to San Juan National Forest
- City Open Space
- County lands
- Pile Burning Program



[https://www.co.laplata.co.us/departments/emergency\\_management/cdphe\\_epa\\_grant.php](https://www.co.laplata.co.us/departments/emergency_management/cdphe_epa_grant.php)

[https://www.co.laplata.co.us/departments/emergency\\_management/coswap.php](https://www.co.laplata.co.us/departments/emergency_management/coswap.php)



# 2023 Wildfire Season Outlook

## References:

National Interagency Fire Center (NIFC), Predictive Services  
<https://www.nifc.gov/nicc/predictive/outlooks/outlooks.htm>

Rocky Mountain Coordination Center (RMCC), RMA Predictive Services  
<https://gacc.nifc.gov/rmcc/outlooks1.php>

Colleen Haskill, CH (2023 May 4<sup>th</sup>). RMA Seasonal Briefing Video [Slides 3-9].  
Rocky Mountain Area Coordination Center – Predictive Services

United States Forest Service – Wildfire Assessment System (WFAS)  
<http://wfas.net/>