



# NATIONAL FUELS & FIRE DANGER BRIEFING

PREDICTIVE SERVICES



08/25/2023

# About these National Fuels & Fire Danger Briefings...



PREDICTIVE SERVICES 



These briefings are prepared by the National Interagency Coordination Center's ([NICC](#)) Predictive Services staff and presented to the National Multi-agency Coordinating Group ([NMAC](#)). After presentation to NMAC, the most recent briefing is posted on NICC's [Fuels and Fire Danger webpage](#).

Frequency of issuance for these briefings depends on National Preparedness Level ([PL](#)) and NMAC's regular meeting schedule.

- PL1-PL2: Once per month
- PL3-PL5: Weekly (usually on Thursdays)

Because the target audience is NMAC and the material is presented as slides, the briefing content is often terse and assumes a high level of familiarity with the interagency coordination system and fire danger concepts. At the end of this document, following the briefing summary page, there are references that may be helpful for less familiar readers. These include a map of the Geographic Areas and a list of commonly-used abbreviations and acronyms.

Today

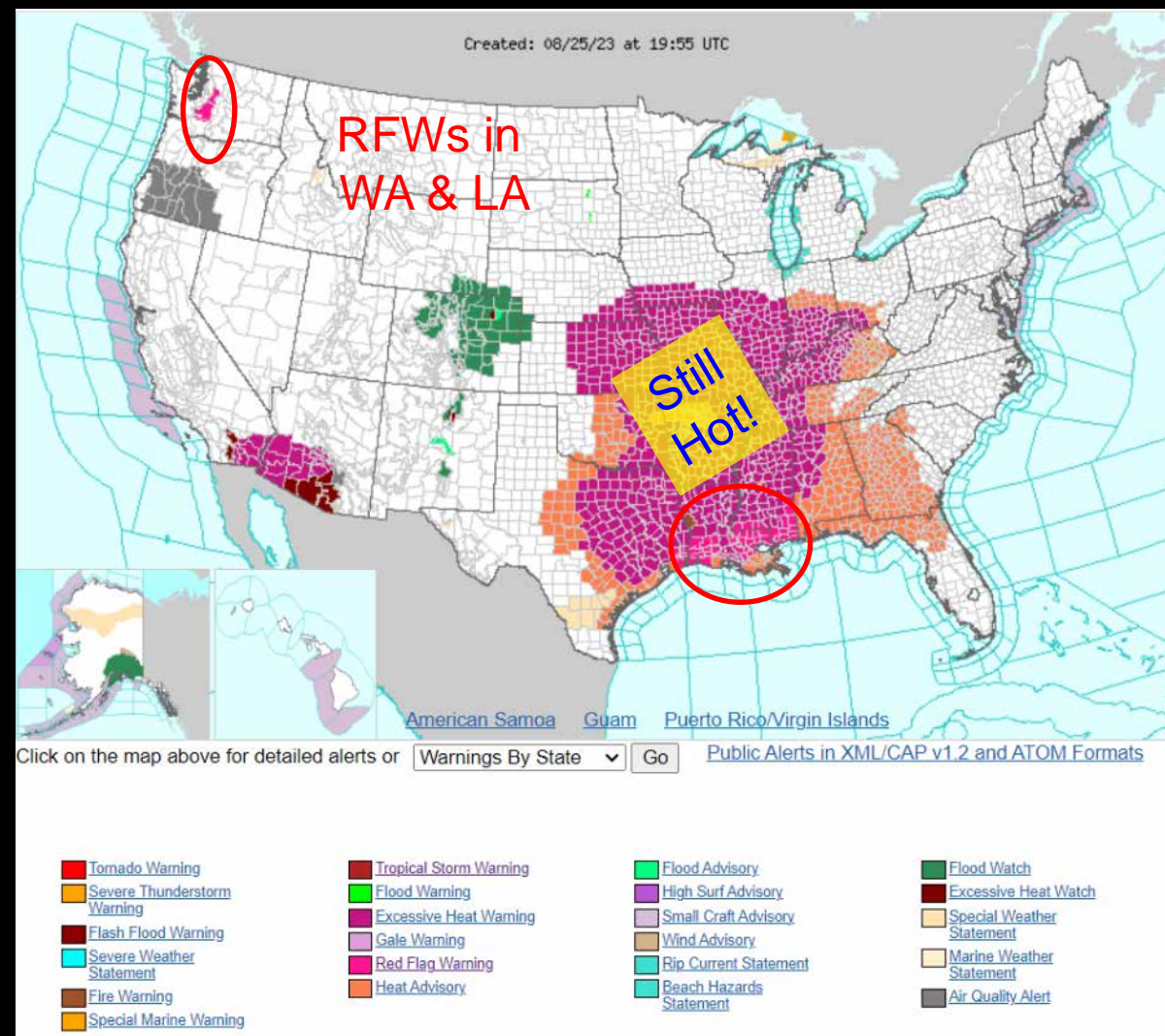
More (dry?) lightning  
today in the Northwest

← [Link](#)

## Fire Weather Advisories

08/25/2023

↓ [Link](#)



Tomorrow

No Areas  
of Elevated  
Concern

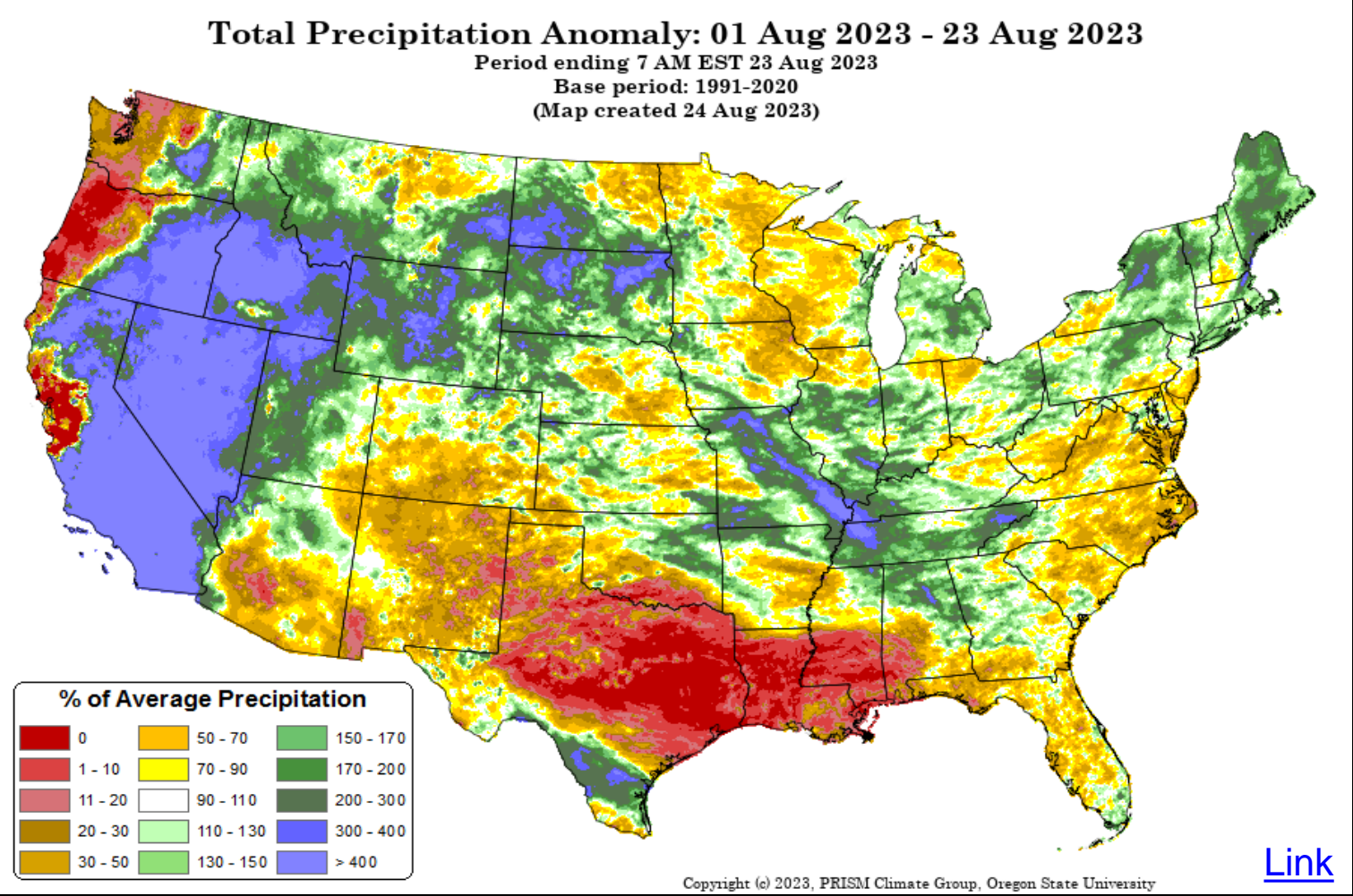
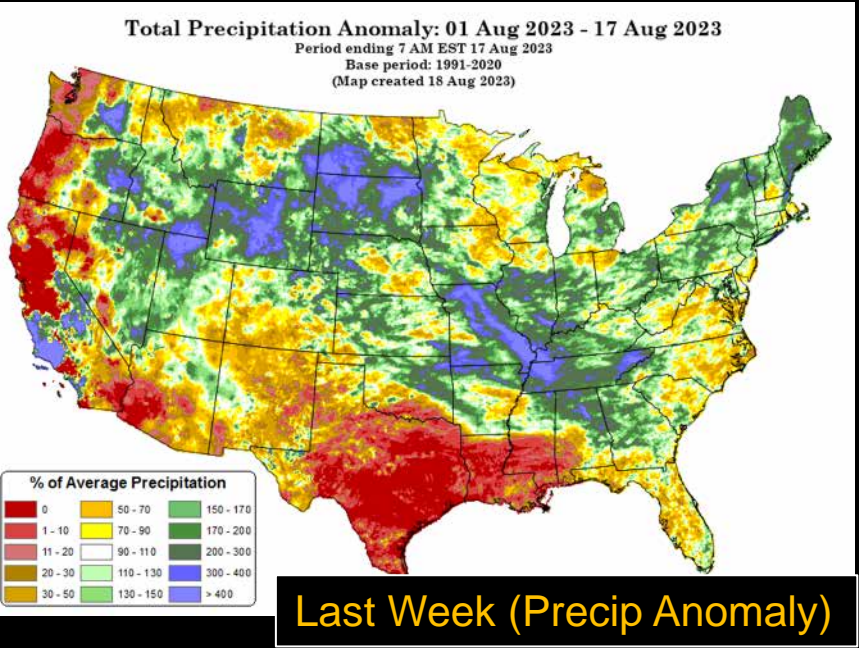
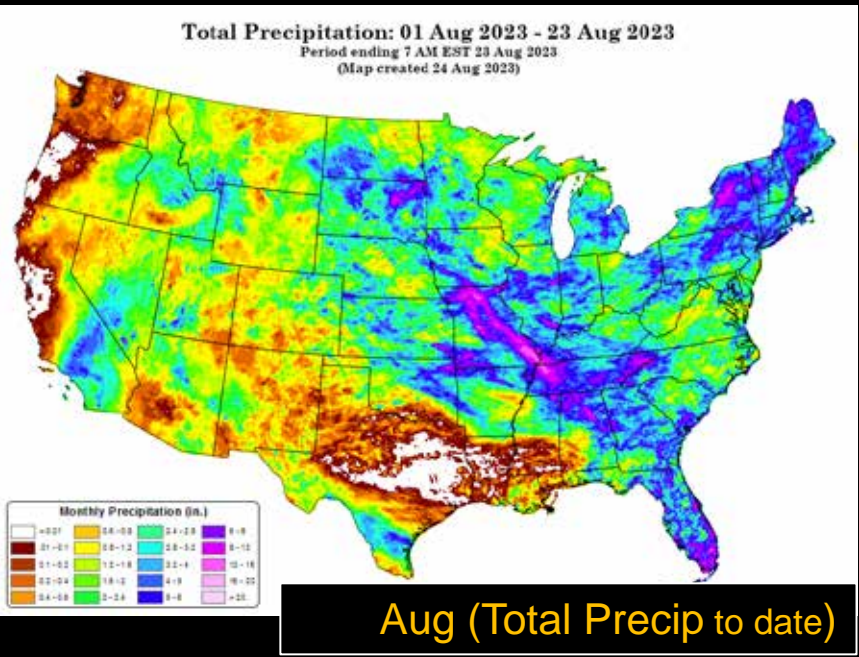
Not shown here is yesterday's Advisories that correctly predicted (mostly dry) lightning in the Greater Northwest. Indeed, numerous ignitions have already been reported this morning in the southern Cascades. The lightning threat lingers today, focused more on the northern Cascades.

[Link](#) →

Sources: NWS; Storm Prediction Center



# Monthly Precipitation (to date)



In comparison to last week, the month-to-date anomaly map shows the significant positive impact of the precipitation from the remnants of Tropical Storm Hilary in several western states. Unfortunately, areas with existing Large Fires – i.e. coastal and West-side sites in ONC & NW, plus N ID & NW MT – did not get much precip. Even so, fire danger (ERC) in these areas has improved significantly in response to higher RH, cooler temps, cloud cover, and other moderating conditions.

Note that parts of C/E TX & LA haven't seen any precip so far this month. Some parts of TX didn't get any rain in July either!

**08-24-2023**

Source: PRISM Climate Group (OSU)



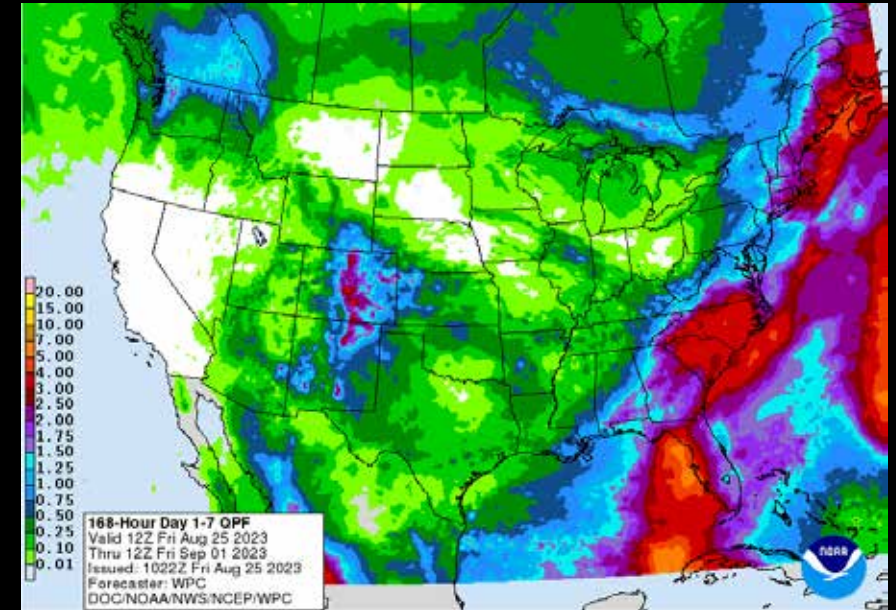
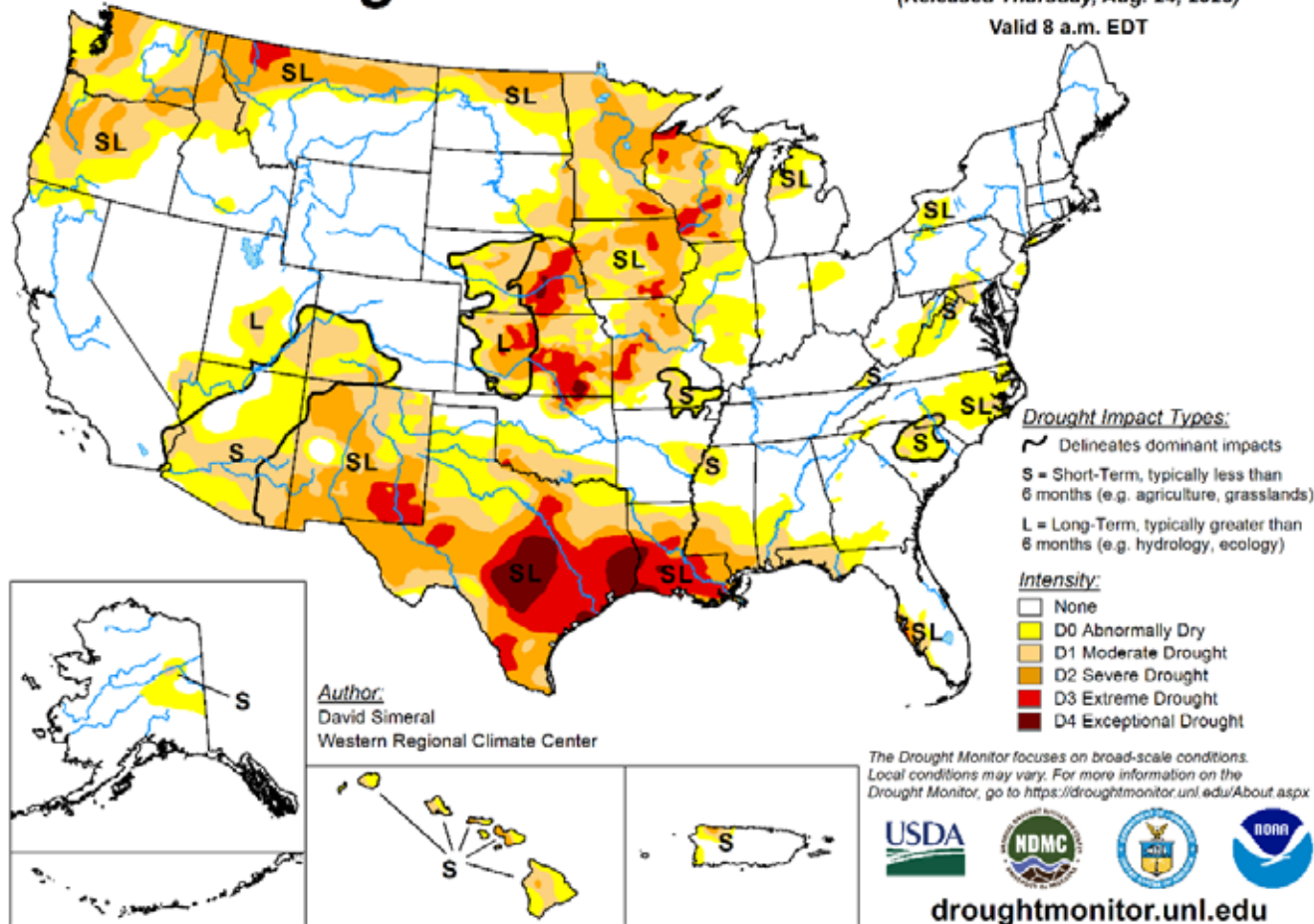
# Drought Status & Precipitation Outlook

08-25-2023

[Link](#)

## U.S. Drought Monitor

August 22, 2023  
(Released Thursday, Aug. 24, 2023)  
Valid 8 a.m. EDT

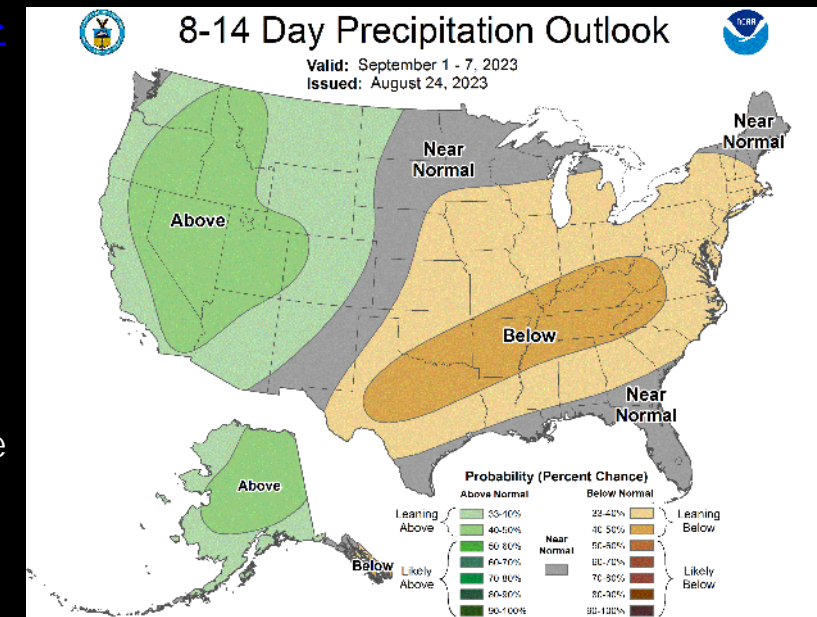


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## 1-7 Day Precip Outlook

## 8-14 Day Precip Outlook

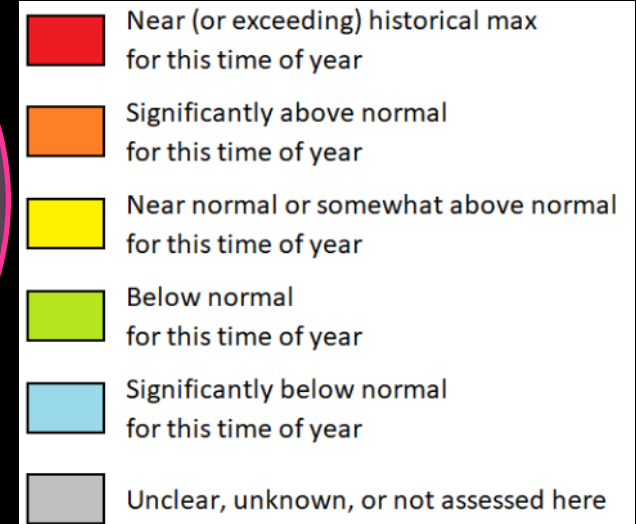
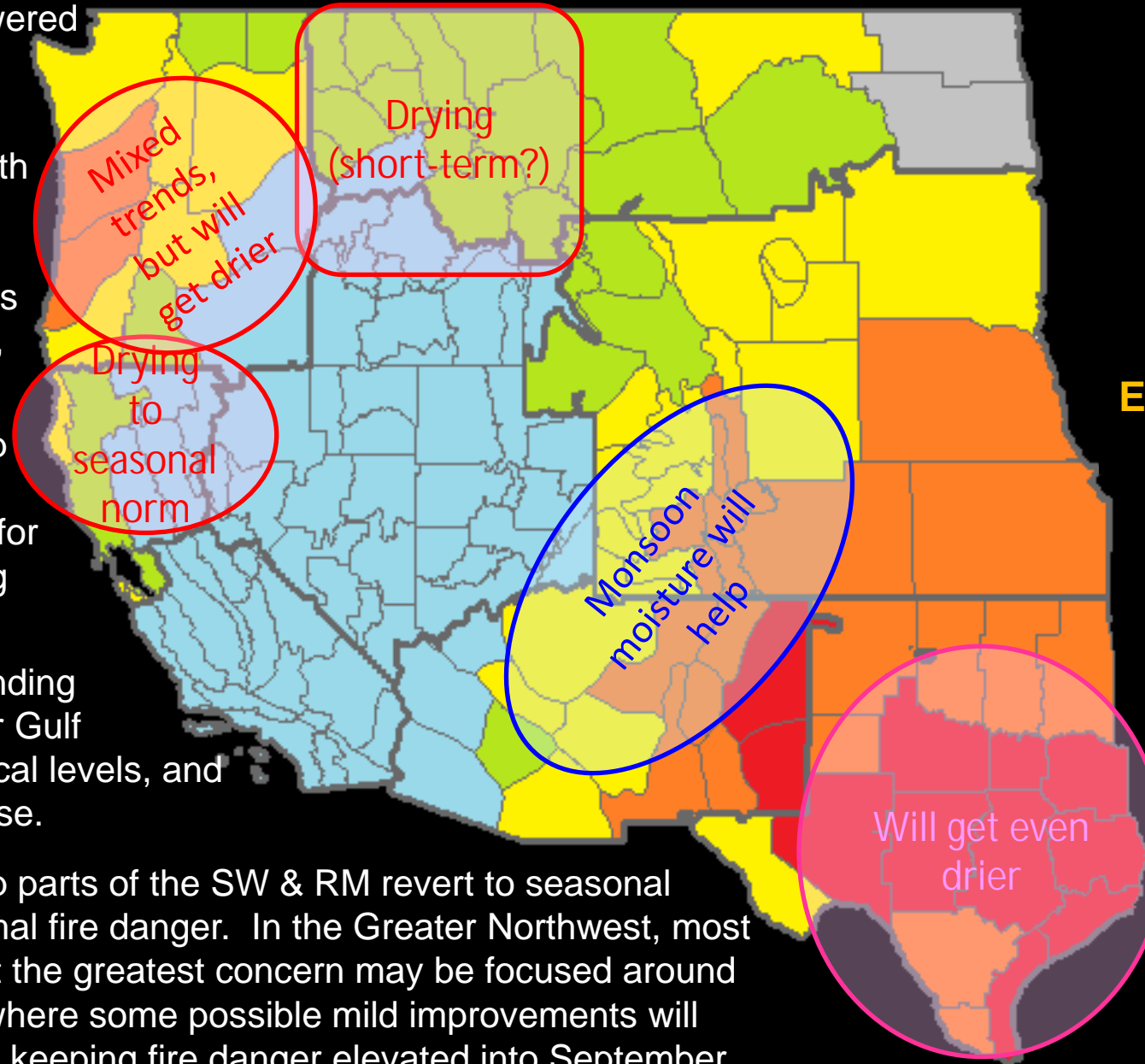
[Link→](#)



Drought status in parts of TX and LA has intensified to Exceptional, and no significant precip is expected over the next 7 days and probably even beyond. Dry weather is also expected in N CA and S OR, which will allow fire danger there to rebound quickly, back up to above normal levels. In contrast, significant rain may arise further north, around the Canadian border. If N ID and NW MT do get good precip next week (on the heels of Hilary's beneficial impacts), that may be enough to definitively end the fire season there.

# Fire Danger in the Western States

## Energy Release Component (timber fuel models)



Precip from Tropical Storm Hilary has substantially lowered fire danger in OSC, GB, & adjacent areas.

Areas further west and north did not receive significant precip, but benefitted from other moderating conditions (cooler temps, cloud cover, higher RH).

Monsoon moisture will help lower fire danger in parts of SW & RM, which is key for abnormally dry areas along and east of The Divide.

Fire danger in Texas, extending eastward through the other Gulf Coast states is now at critical levels, and this will likely get even worse.

Monsoon moisture will help parts of the SW & RM revert to seasonal normal or even below normal fire danger. In the Greater Northwest, most areas are drying again, but the greatest concern may be focused around the Cascades and coast, where some possible mild improvements will yield to longer-term drying, keeping fire danger elevated into September.

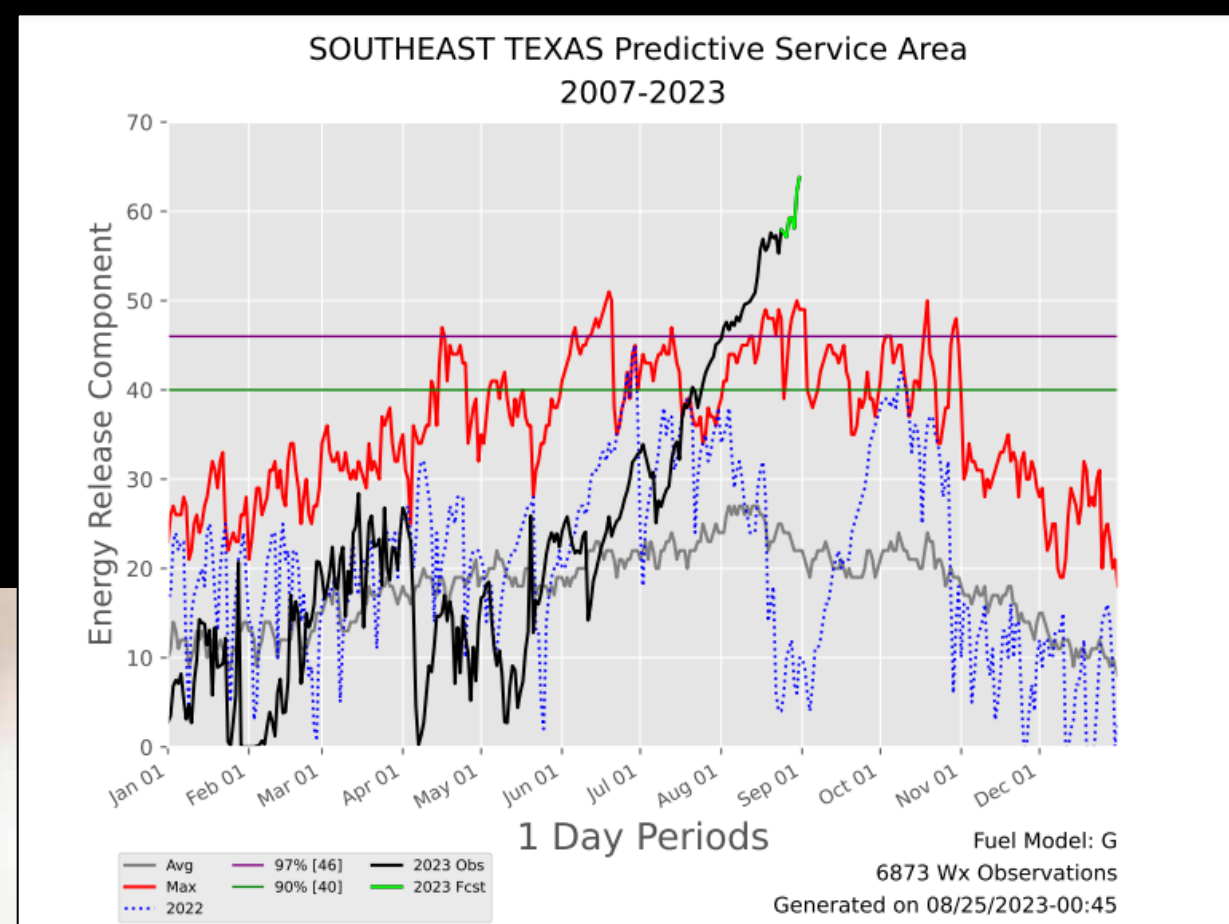


# Fire Danger and Fire Behavior in Forests of East Texas & Louisiana

Over the past few days, significant fires emerged in southern pine forests, burning very aggressively. Texas A&M Forest Service's Predictive Services unit notes the record-high fire danger (ERC-g), which is expected to trend further upward. Similar conditions exist in adjacent areas, and fire activity here will remain elevated in the absence of significant precipitation. Outside of precip footprints, tropical storms could make conditions worse (drying, winds).



Extreme fire behavior including torching, spotting and crown fire was observed on the Spann Fire in Shelby County on August 20<sup>th</sup>. Weather observations at 1700 hrs at the Center Municipal Airport were temperature of 105 degrees, relative humidity of 17% and NE winds at 9 MPH gusting to 16 MPH. Photo Credit: San Augustine Fire Department Facebook.



Link [here](#) to the Texas A&M Forest Service's weekly Fire Potential Update.

08-25-2023

# Fuels & Fire Behavior Advisories

- Central & East Texas
  - Updated 8/14 (first issued 7/31)
  - Very dry fuels, including live fuels
  - Lowered thresholds for critical fire weather
  - Long burn periods
  - Potential for extreme fire behavior
  - Lengthy mop-up
- Louisiana, S. Mississippi, SW Alabama, W FL Panhandle
  - Issued 8/18
  - Similar conditions as TX
    - Very dry fuels, including ladder fuels
    - Long burn periods
    - High resistance to control
    - Potential for extreme fire behavior
  - Possible negative impacts from tropical storms
- *Note: Alaska F&FBA rescinded on 8/18*

## Fuels and Fire Behavior Advisory

### Central and East Texas

Date Advisory Effective – August 14, 2023

**Subject:** A flash drought is ongoing for the areas of concern due to persistent above normal temperatures and below normal rainfall. This drought follows an early growing season where above normal rainfall resulted in a robust and continuous stand of grass across the Central Texas landscape. This continuous grass fuel bed facilitates the ignition and spread of wildfires as the grass wilts and cures in the Texas heat and drought. The flash drought and underlying dryness have unlocked the availability of large dead fuels and canopy fuels for combustion. These fuels are now contributing to fire behaviors that increase the resistance to control of wildfires burning in high-risk pine timber in East Texas and oak/juniper fuel beds across Central Texas.

**Discussion:** A persistent upper level high pressure pattern has suppressed meaningful rainfall and produced the hottest July on record for many reporting stations in Central Texas. Consecutive weeks of 100-degree temperatures have accelerated the loss of moisture in the fire environment and contributed to the availability of additional fuel, which results in very high fire intensities. Very high fire intensities will support active crown fire. Spotting distances of 600-800 feet have been observed on recent fires.

**Difference from normal conditions:** Energy Release Component values in twelve Predictive Service Areas within the area of concern are above the 90<sup>th</sup> percentile. The Southeast Texas PSA using fuel model G is tracking above the 97<sup>th</sup> ERC percentile and the 16-year seasonal maximum (see image). A total of eight PSAs across the area of concern are forecast to be above the 97<sup>th</sup> percentile over the next 7 days. Fire weather produce crown fire in high-risk timber and lower with the fuel dryness indicated by 90 degree temperatures, windspeed near 15 mph (west of I-35) and near 35% east of I-35 triggers.

#### Concerns to Firefighters and the Public:

- Extreme fireline intensity is to be expected and extended attack. Currently, only elevated produce extreme fire line intensities and
- Typical barriers to fire spread like roads, river bottoms cannot be relied upon to
- Active fire behavior may extend into the poor overnight moisture recovery.
- Spotting has routinely been reported including small initial fire fires.
- Return of scorched needle cast in pine suppression



## Fuels and Fire Behavior Advisory

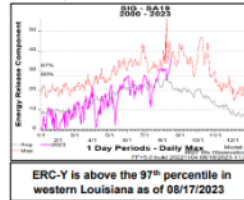
### Louisiana, Southern Mississippi, Southwest Alabama and the Western Florida Panhandle

Date Advisory Effective – August 18, 2023

**Subject:** Persistent, record-breaking heat and flash drought development have led to a steady increase in wildfire activity during the first half of August, resulting in elevated fire behavior and increased resistance to control across Louisiana and portions of Mississippi. The potential for these conditions is likely to increase throughout the region, and an expected uptick in tropical cyclone activity could lead to periods of critical fire weather if widespread wetting rain does not materialize through the end of August.

**Discussion:** Thunderstorm activity that normally produces 1-2" of rainfall per week this time of year has been isolated across the central Gulf Coast and Lower Mississippi Valley since the beginning of July. Increasing areas within the advisory have not observed wetting rainfall in 20-40 days, while the mid-July to mid-August period has been the hottest on record. An objective, long-term analysis from the National Drought Mitigation Center depicts the equivalent of severe to exceptional drought scattered across the region, which extends back to the multi-year La Niña that precedes this year's developing El Niño. Soil moisture data from NASA-SPoRT is alarmingly low, with large expanses of the central Gulf Coast showing values in all relevant layers below the 2<sup>nd</sup> percentile. Intense high pressure aloft responsible for increasing heat in the short term is likely to steer a tropical disturbance in the Gulf of Mexico well to the south during the week of August 21<sup>st</sup>. Winds associated with this disturbance may significantly increase the risk for large fires, crown runs and extreme fire behavior as otherwise very hot and dry conditions persist.

**Difference from normal conditions:** KBDIs above 700 are widespread, on par with droughts observed in 2000 and 2011. ERC-Y has frequently been above the 90<sup>th</sup> percentile since at least mid-July and has trended to or above the 97<sup>th</sup> percentile this week in many of the affected predictive service areas. Live fuel moisture on a recent palmetto sample along the Alabama coast was at 65%, suggesting the potential for wildfires is likely to increase in this high risk fuel type. Temperatures above 100 degrees, min. RH of 20-35% and winds of 5-15 mph have produced increased fire behavior for inland areas of Louisiana and Mississippi, while coastal fires have been associated with highs in the mid-90s, min. RH from 30-50% and wind gusts of 15-25 mph.



#### Concerns to Firefighters and the Public:

Thunderstorms and nearby thunderstorms may produce problematic changes in wind velocities that result in fire behavior and heightened danger for first responders. Heavy rain may not temper fire behavior, and established coastal fires in high risk fuels may burn through the night when winds stay up. Winds of 10 mph or above may lead to crown runs in pine-dominant fuels, while a yaupon may carry fire up from the ground as live fuel moisture continues to decrease. These conditions present a heightened risk for heat exhaustion and heatstroke. Stay hydrated. Be prepared for a rapid increase in fire behavior due to nearby tropical cyclones.

Firefighters should be prepared to support periods of more frequent fire occurrence as well as on incidents. Frequency and distance may require wider than normal containment lines with more mop up. Firefighters should anticipate constructing wider than normal control lines. In suppression efforts should be thoroughly briefed that fire behavior is exceeding for this time of the year.

Large diameter surface fuels and ground fuels are burning more readily and due to low 1000-hr fuel moisture and underlying drought. The time and effort needed for mop up will continue to increase as large diameter fuels and ground fuels hold heat.

[Link](#)

Source: NICC, GACCs

08-25-2022



# Fuels & Fire Danger Summary

08/25/2023

- **Main threat:** Lightning (mostly dry?) that began in the S Cascades last night will continue today, moving into the N Cascades. Receptive (tho not critically dry) fuels will result in numerous IAs and possibly some emerging large fires.
- NR & N GB: Precip from Tropical Storm Hilary was not as abundant as we expected, but still significantly resolved fire danger concerns. Any additional precip received in the next few days could effectively end large fire risk for the remainder of the season. But, if hot/dry conditions resume, fire danger could revert to seasonal normal levels in early Sept.
- OSC & W GB: Hilary's precip likely ended risk of large, long-duration fires for remainder of summer. In OSC, next period of concern will arise with the onset off-shore winds this fall.
- ONC & NW: Areas along North Coast & West-side of Cascades did not get long-term relief. ERCs in ONC will rebound to seasonal normal levels (and above) in the next few days. In NW, ERCs are already back above normal. Forecast precip in WA may allow another reset.
- **SA:** Fuels are critically dry, including brush understory. Conditions will worsen, and area of concern will expand in size. Tropical storms could be problematic outside of rain footprint.

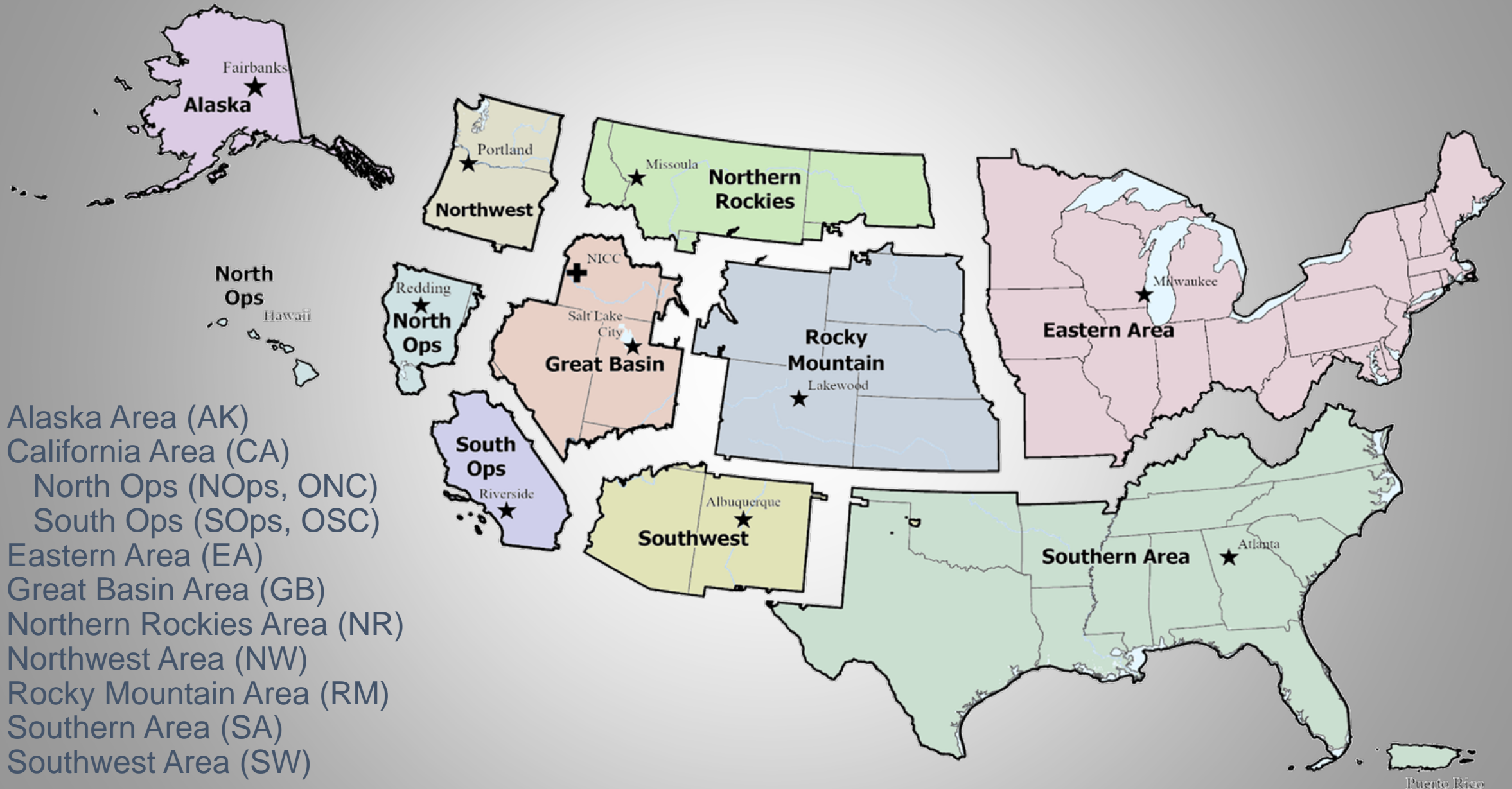
Comments or questions?

Please contact  
Steve Larrabee at  
[steven.larrabee@bia.gov](mailto:steven.larrabee@bia.gov)  
or your local servicing  
Predictive Services Staff





# 9 GEOGRAPHIC AREAS & 10 COORDINATION CENTERS



# Abbreviations & Acronyms

100-hr	Dead woody fuel moisture for 100-hour timelag size class
1000-hr	Dead woody fuel moisture for 1000-hour timelag size class
BI	Burning Index (an NFDRS output)
BUI	Buildup Index (a CFFDRS output)
CFFDRS	Canadian Forest Fire Danger Rating System
DFM	Dead Fuel Moisture content
EDDI	Evaporative Demand Drought Index
ERC	Energy Release Component (an NFDRS output)
F&FBA	Fuels & Fire Behavior Advisory
F&FD	Fuels and Fire Danger
FD	Fire Danger
FEMS	Fire Environment Mapping System
FFMC	Fire Fuel Moisture Code (a CFFDRS output)
FM	Fuel Model (or Fuel Moisture - see also DFM & LFM)
FWW	Fire Weather Watch
GACC	Geographic Area Coordination Center
GOES	Geostationary Operational Environmental Satellite Network
IA	Initial Attack
ICS-209	Incident Status Summary (large fire report)
IMSR	National Incident Management Situation Report
IMT	Incident Management Team
ISI	Initial Spread Index (a CFFDRS output)

## Commonly Used in These Briefings

KBDI	Keetch-Byram Drought Index
LF, LFs	Large Fires (aka Significant Fires)
LFM	Live Fuel Moisture content
MODIS	Moderate Resolution Imaging Spectroradiometer (satellite-based thermal detection)
NDVI	Normalized Difference Vegetation Index
NFDRS	National Fire Danger Rating System
NICC	National Interagency Coordination Center
NMAC	National Multi-Agency Coordinating Group
NWS	National Weather Service
PL	Preparedness Level
PSA	Predictive Service Area
RAWS	Remote Automated Weather Station
RFW	Red Flag Warning
RH	Relative Humidity
SFDI	Severe Fire Danger Index (derived from BI & ERC percentiles)
SIG	Special Interest Group (a grouping of RAWS)
SPC	NOAA Storm Prediction Center
VIIRS	Visible Infrared Imaging Radiometer Suite (satellite-based thermal detection)
WFAS	Wildland Fire Assessment System
WFDSS	Wildland Fire Decision Support System
WIMS	Weather Information Management System



# PARTNERING AGENCIES



## Fire Management Agencies and Partners

Bureau of Indian Affairs ([BIA](#))  
Bureau of Land Management ([BLM](#))  
Bureau of Reclamation ([BOR](#))  
Federal Emergency Management Agency ([FEMA](#))  
US Fish & Wildlife Service ([FWS](#))  
National Association of State Foresters ([NASF](#))  
National Park Service ([NPS](#))  
National Weather Service ([NWS](#))  
DOI Office of Wildland Fire ([OWF](#))  
US Fire Administration ([USFA](#))  
US Forest Service ([USFS](#))

## Interagency Coordination & Management Groups

Geographic Area Coordination Centers ([GACCs](#))  
National Interagency Coordination Center ([NICC](#))  
National Interagency Fire Center ([NIFC](#))  
National Multi-Agency Coordinating Group ([NMAC](#))  
National Wildland Fire Coordinating Group ([NWCG](#))