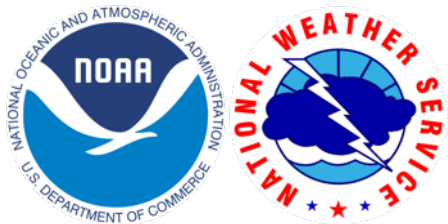


2020 Summer Heat to Fire – Discussion and Outlook



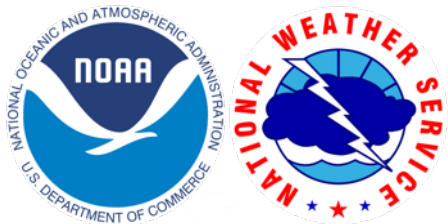
SF Gate



2020 Summer Heat to Fire – Discussion and Outlook

Topics

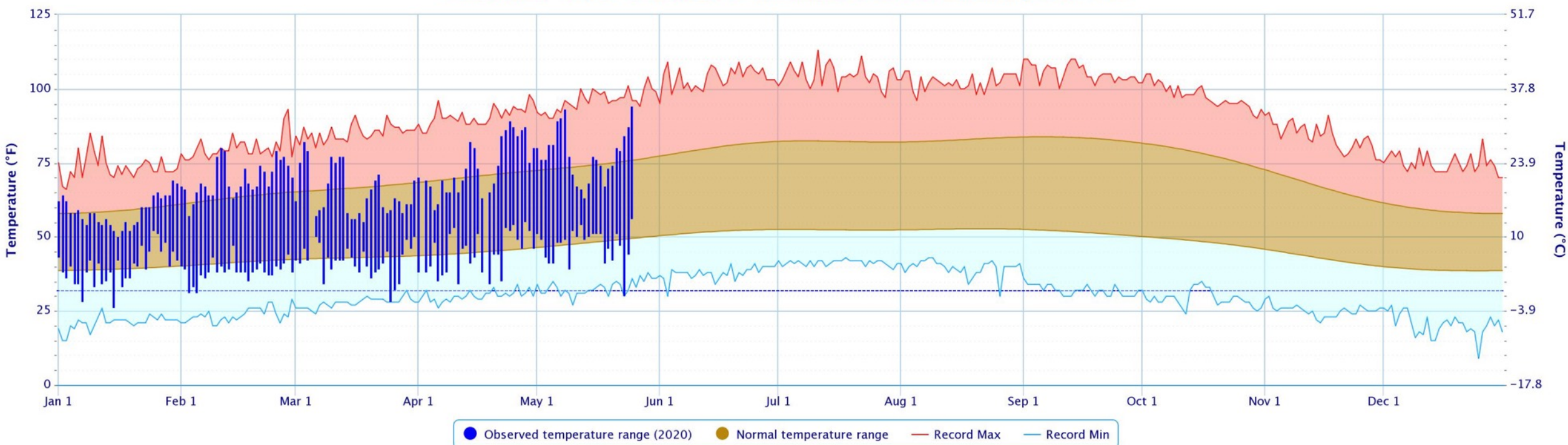
- Heat
 - Season
 - Heat risk
 - Heat Safety
- Evapotranspiration
- Drought
- Fire
 - Fuels
 - Measurement style
 - Charts
 - Water Year % of normal
 - Winds
 - Offshore events
 - Time of year
 - Climatology
 - Fire Safety
 - Criteria
- PG&E - PSPS
- Seasonal Forecast
 - ENSO
 - GACC



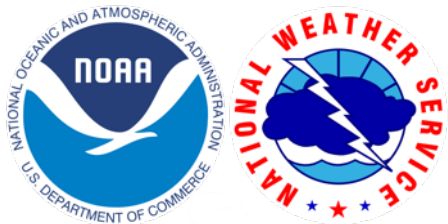
2020 Summer Heat

Daily Temperature Data - SANTA ROSA, CA

Period of Record - 1902-06-02 to 2020-05-25. Normals period: 1981-2010. Click and drag to zoom chart.



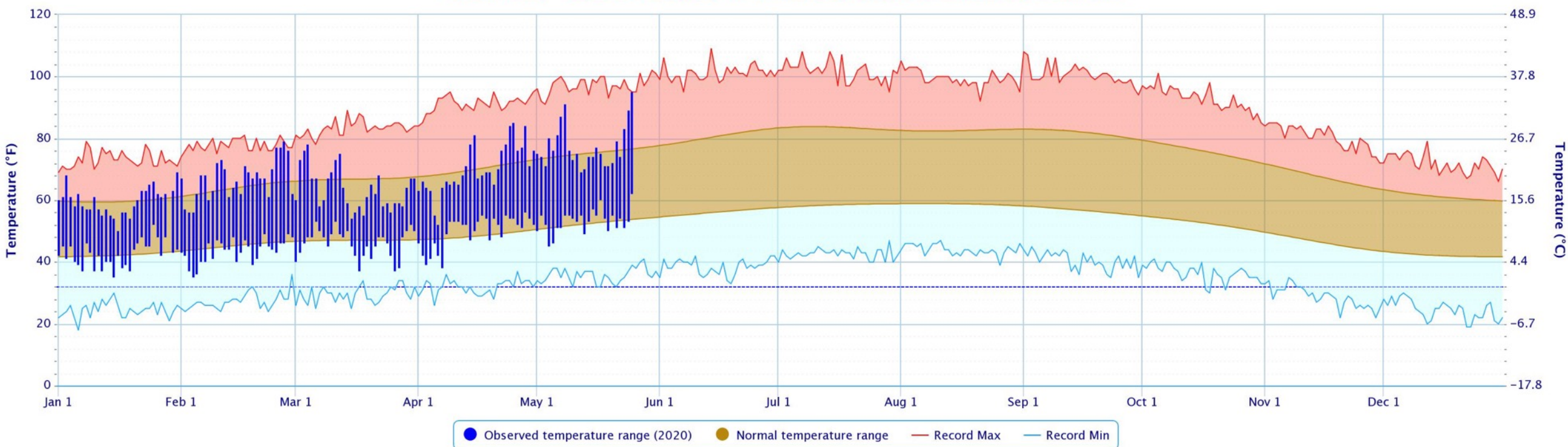
Powered by ACIS

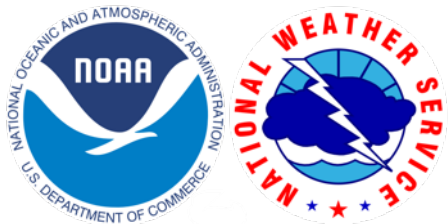


2020 Summer Heat

Daily Temperature Data – SAN JOSE, CA

Period of Record – 1893-01-01 to 2020-05-25. Normals period: 1981-2010. Click and drag to zoom chart.

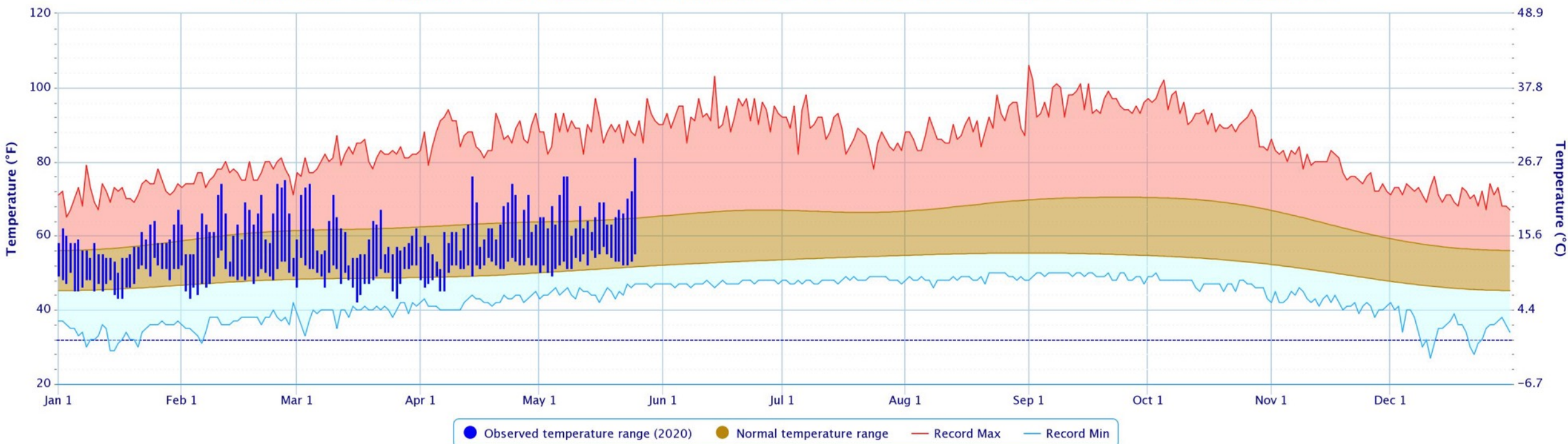


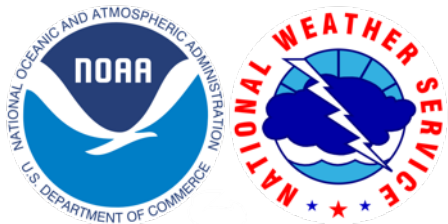


2020 Summer Heat

Daily Temperature Data – SAN FRANCISCO DOWNTOWN, CA

Period of Record – Max temperature: 1874-06-01 to 2020-05-25; Min temperature: 1875-01-01 to 2020-05-25. Normals period: 1981-2010. Click and drag to zoom chart.

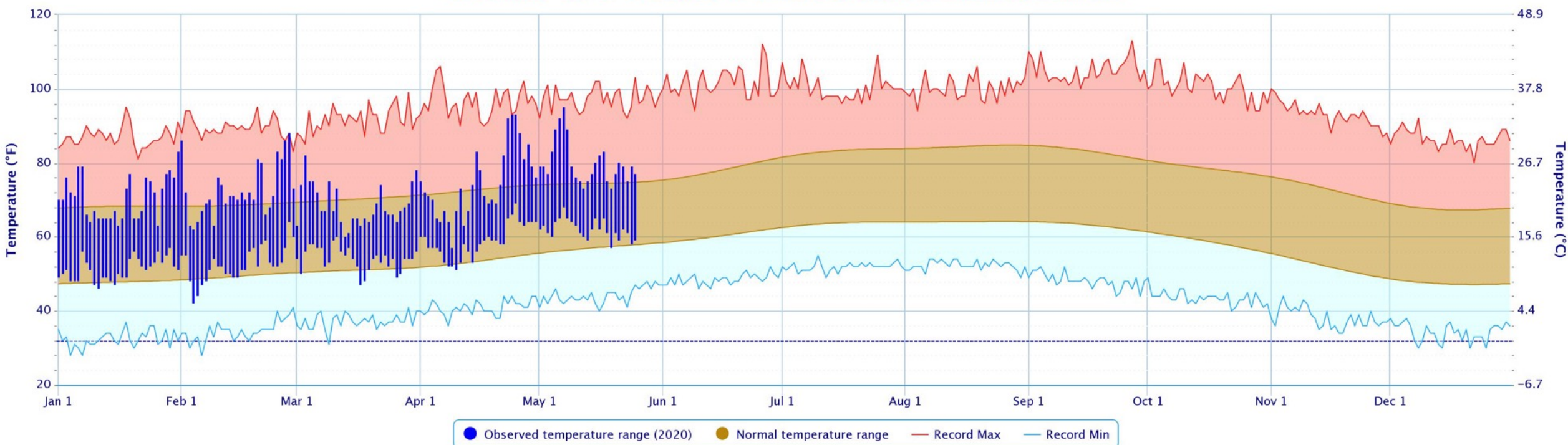


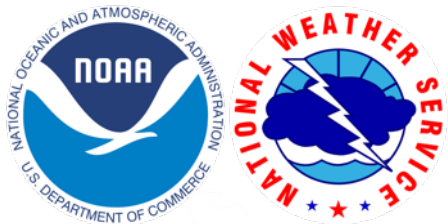


2020 Summer Heat

Daily Temperature Data – Los Angeles Downtown Area, CA (ThreadEx)

Period of Record – 1877-07-01 to 2020-05-25. Normals period: 1981-2010. Click and drag to zoom chart.

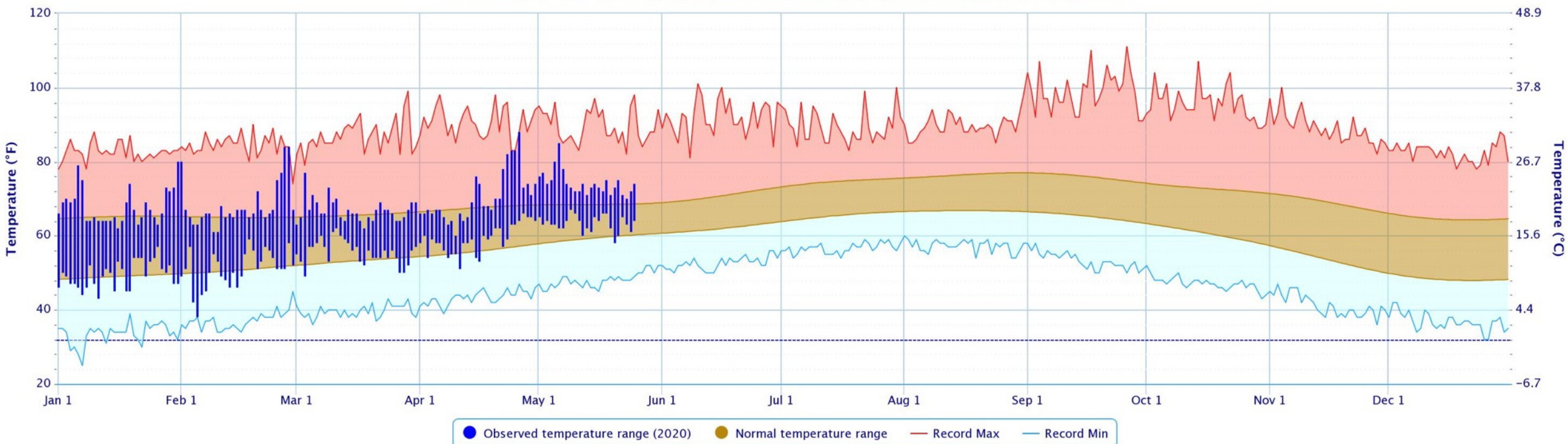


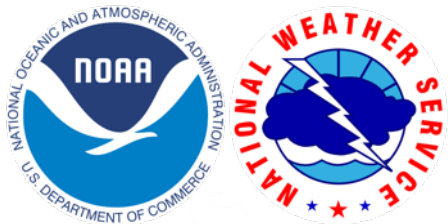


2020 Summer Heat

Daily Temperature Data – San Diego Area, CA (ThreadEx)

Period of Record – 1874-10-04 to 2020-05-25. Normals period: 1981-2010. Click and drag to zoom chart.

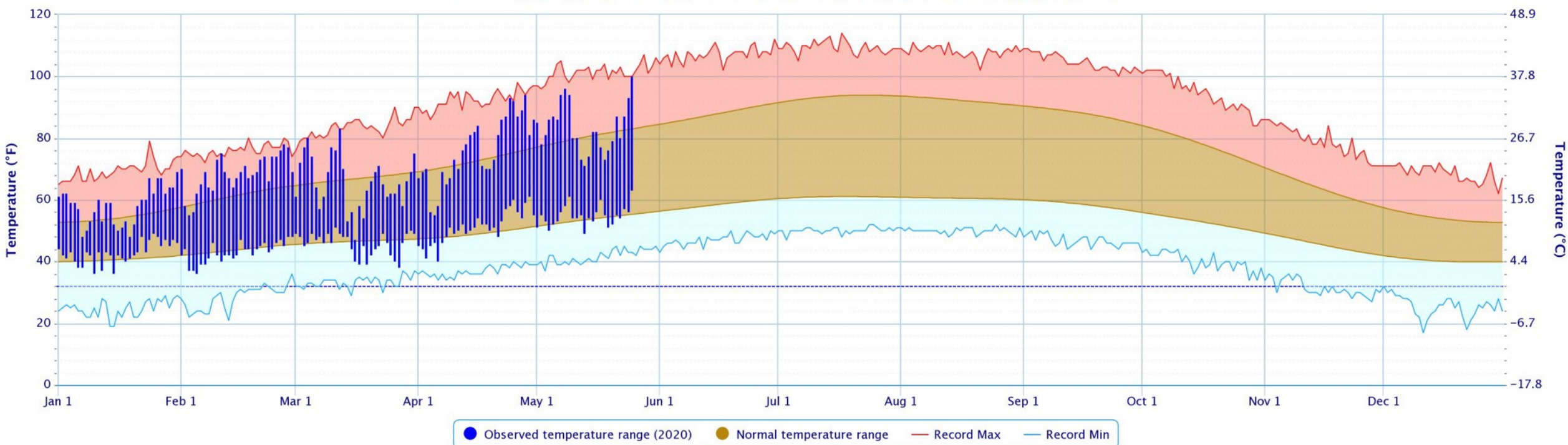


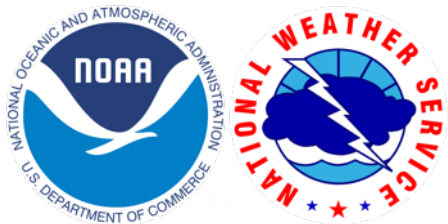


2020 Summer Heat

Daily Temperature Data – Sacramento Downtown Area, CA (ThreadEx)

Period of Record – 1877-07-11 to 2020-05-25. Normals period: 1981-2010. Click and drag to zoom chart.





2020 Summer Heat



National Weather Service
National Oceanic and Atmospheric Administration

Bookmark Download **KML** Graphics CaRDS Survey

NWS Experimental HeatRisk: Identifying Potential Heat Risks in the Seven Day Forecast

Tue 5/26	Wed 5/27	Thu 5/28	Fri 5/29	Sat 5/30	Sun 5/31	Mon 6/1
-------------	-------------	-------------	-------------	-------------	-------------	------------

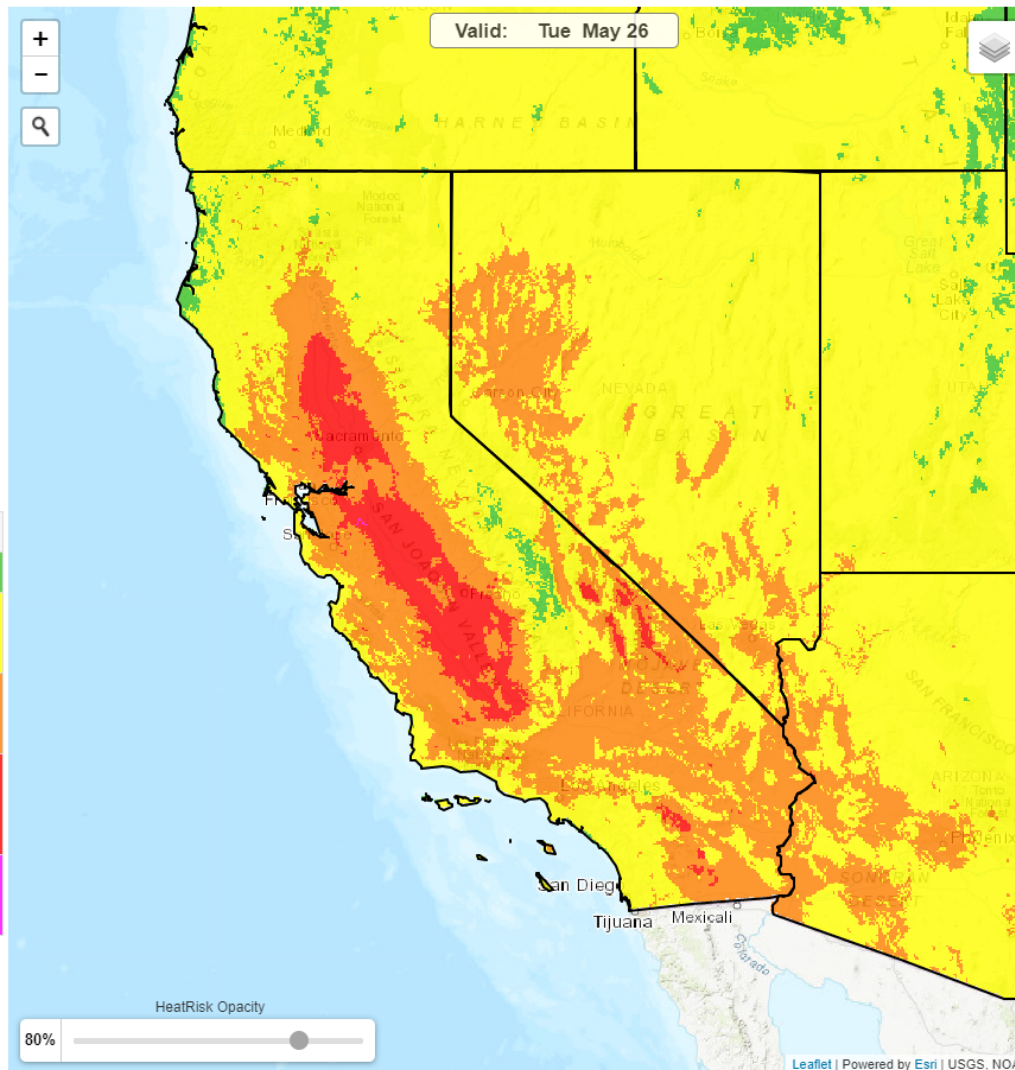
Click map for potential heat risks and NWS forecast for a location.

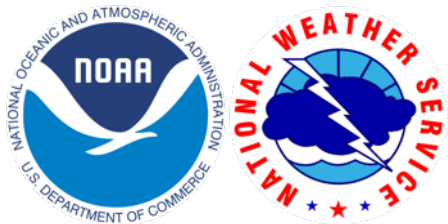
HeatRisk

[More Information](#)

Heat affects everyone differently. In order to better address heat risk and allow you to prepare for upcoming heat events, the NWS has developed the experimental HeatRisk forecast. The NWS HeatRisk forecast provides a quick view of heat risk potential over the upcoming seven days. The heat risk is portrayed in a numeric (0-4) and color (green/yellow/orange/red/magenta) scale which is similar in approach to the Air Quality Index (AQI) or the UV Index. In a similar way, it provides one value each day that indicates the approximate level of heat risk concern for any location, along with identifying the groups who are most at risk. This product is supplementary to the official NWS heat watch/warning/advisory program and is meant to provide continuously available heat risk guidance for those decision makers and heat sensitive populations who need to take actions at levels that may be below current NWS heat product levels.

Category	Level	Meaning
Green	0	No Elevated Risk
Yellow	1	Low Risk for those extremely sensitive to heat, especially those without effective cooling and/or adequate hydration
Orange	2	Moderate Risk for those who are sensitive to heat, especially those without effective cooling and/or adequate hydration
Red	3	High Risk for much of the population, especially those who are heat sensitive and those without effective cooling and/or adequate hydration
Magenta	4	Very High Risk for entire population due to long duration heat, with little to no relief overnight





2020 Summer Heat

Practice HEAT SAFETY Wherever You Are

Heat related deaths are preventable.
Protect yourself and others from the
impacts of heat waves.



Job Sites

Stay hydrated and
take breaks in the shade
as often as possible



Indoors

Check up on the
elderly, sick and those
without AC



Vehicles

Never leave kids or
pets unattended -
LOOK before you LOCK

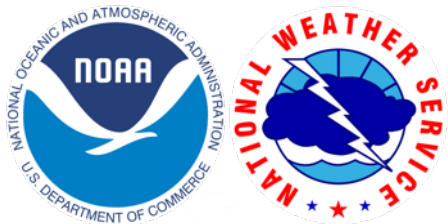


Outdoors

Limit strenuous outdoor
activities, find shade,
and stay hydrated



[weather.gov/heat](https://www.weather.gov/heat)



2020 Summer Heat

Heat Related Deaths
ARE Preventable
LOOK BEFORE YOU LOCK



The temperature in your car can quickly become deadly!

Outside Temperature 80°



Time Elapsed:
10 Minutes



Time Elapsed:
20 Minutes



Time Elapsed:
30 Minutes

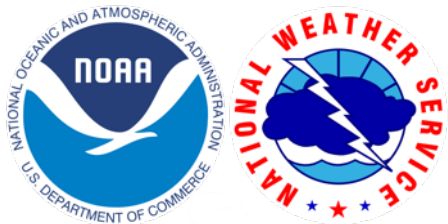


Time Elapsed:
60 Minutes

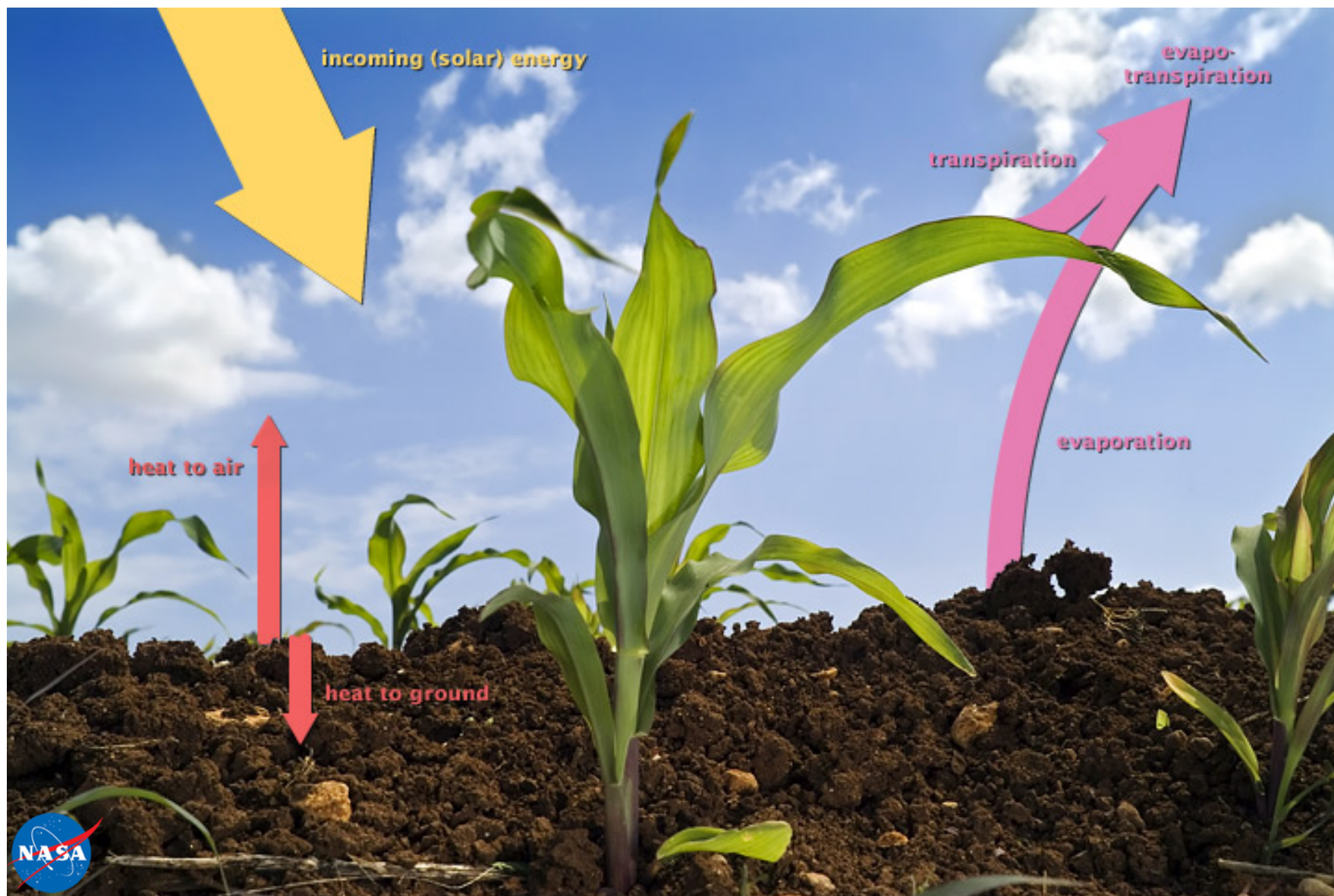


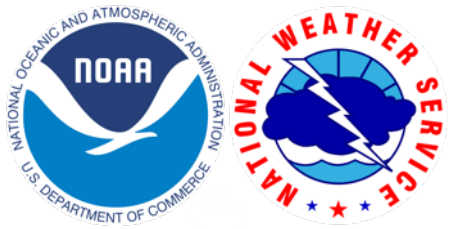
weather.gov/heat

nhtsa.gov

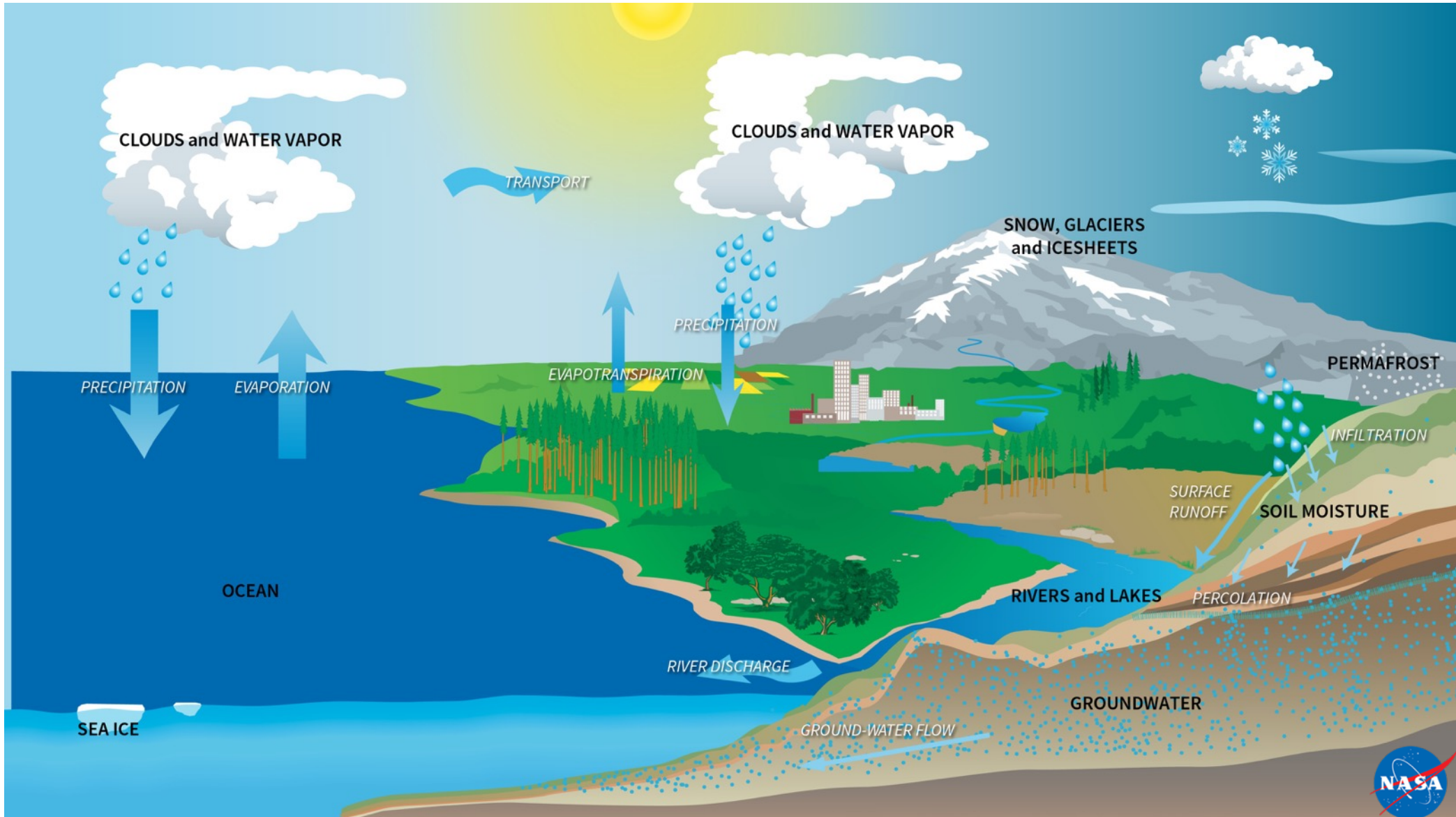


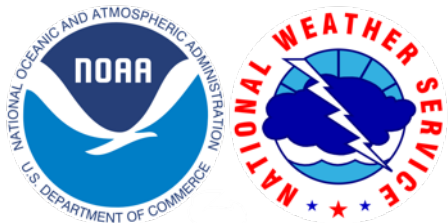
2020 Summer Evapotranspiration



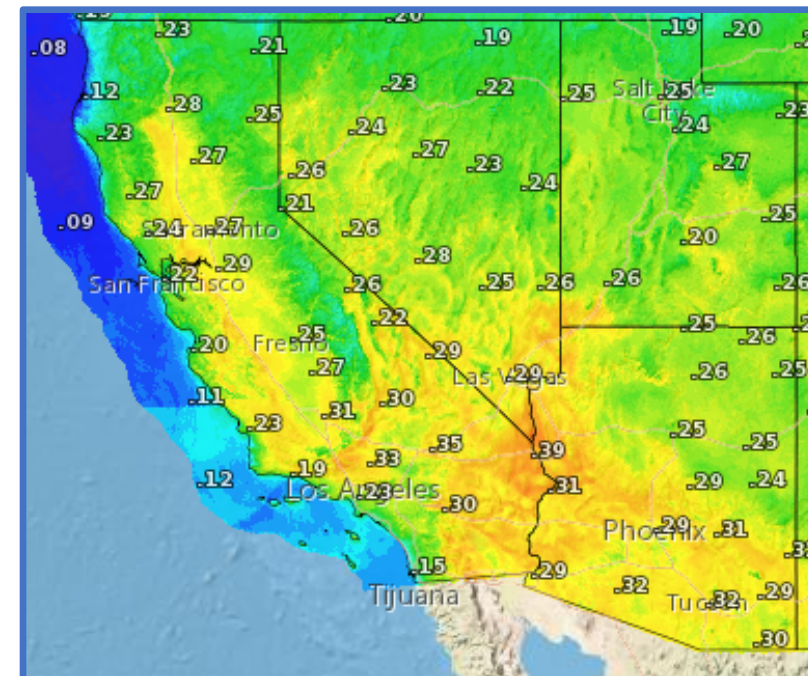


2020 Summer Evapotranspiration

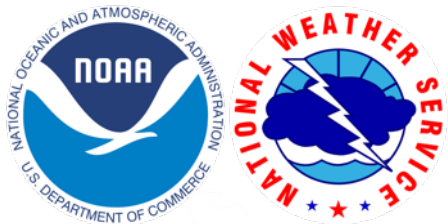




2020 Summer Evapotranspiration

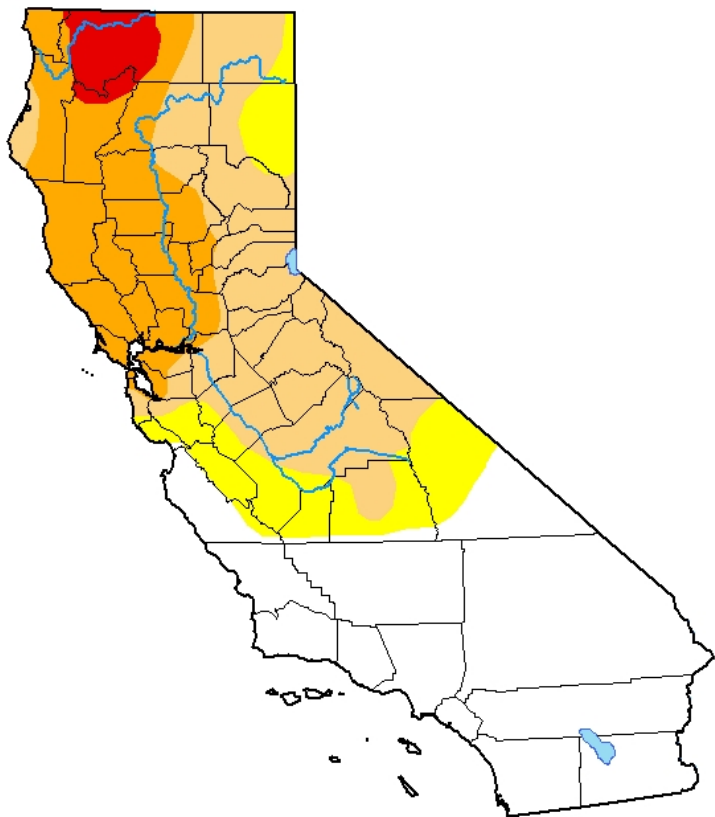


[NWS ET Forecast](#)



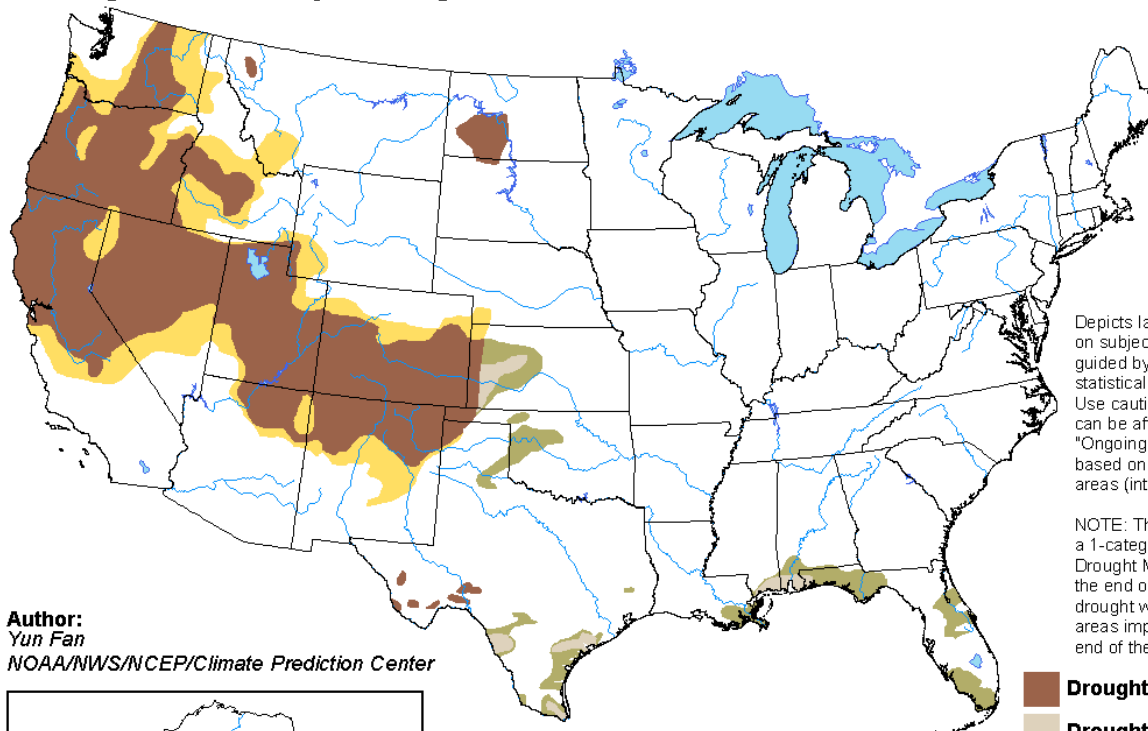
2020 Summer Drought

U.S. Drought Monitor California



U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

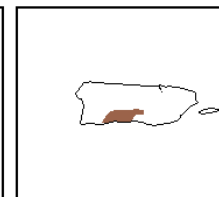
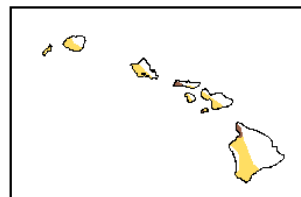
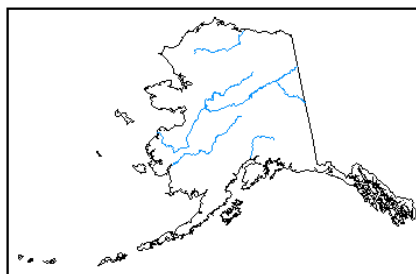
Valid for May 21 - August 31, 2020
Released May 21



Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

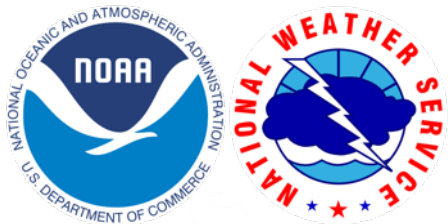
Author:
Yun Fan
NOAA/NWS/NCEP/Climate Prediction Center



- Drought persists
- Drought remains but improves
- Drought removal likely
- Drought development likely

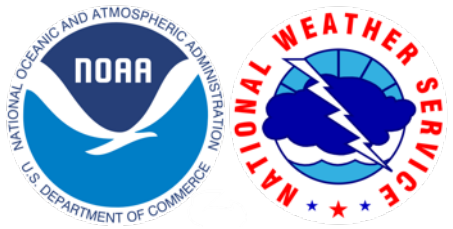


<http://go.usa.gov/3eZ73>



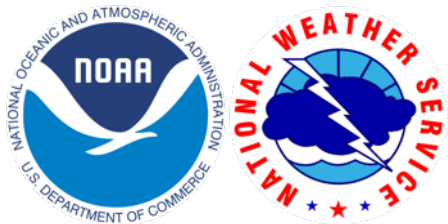
2020 Summer Fire





2020 Summer Fire Fuels

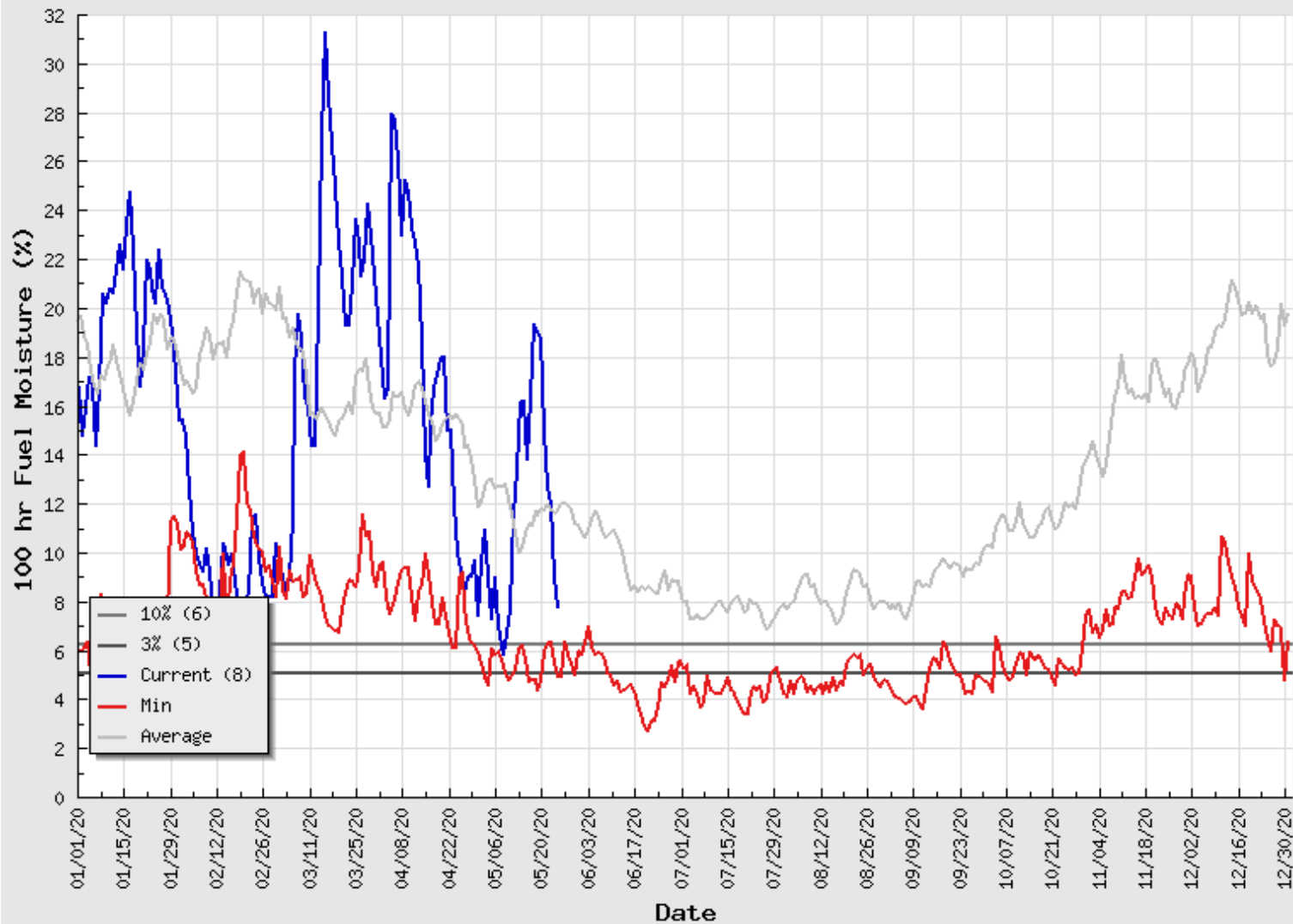


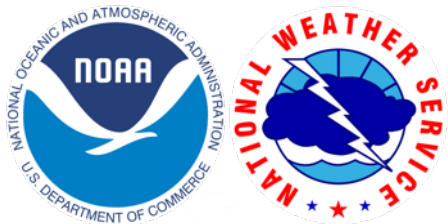


2020 Summer Fire Fuels

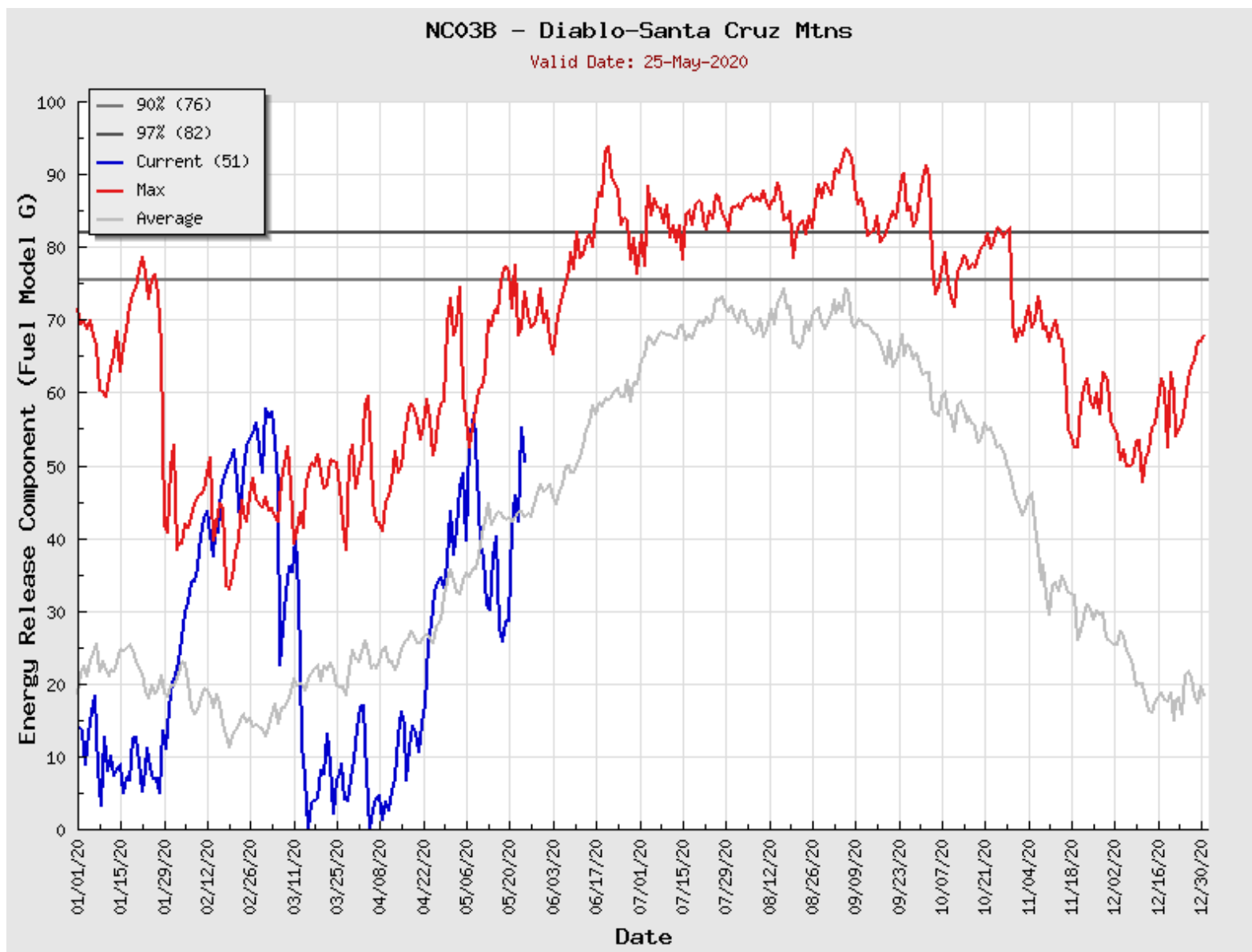
NC03B - Diablo-Santa Cruz Mtns

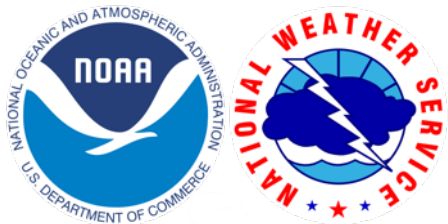
Valid Date: 25-May-2020





2020 Summer Fire Fuels

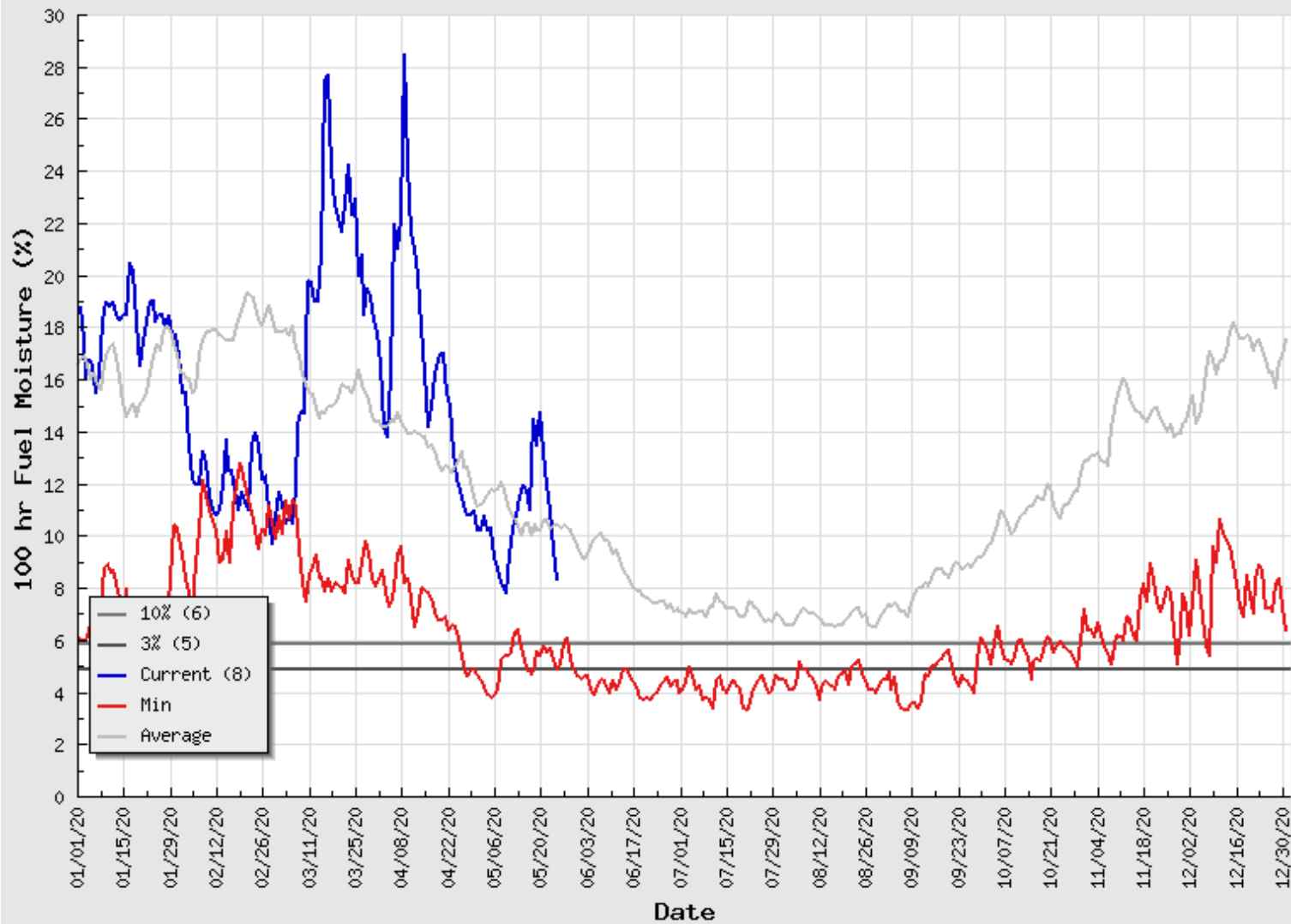


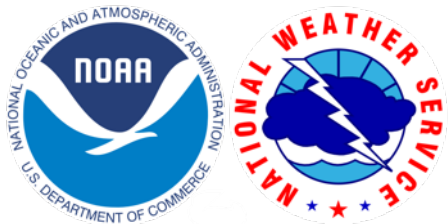


2020 Summer Fire Fuels

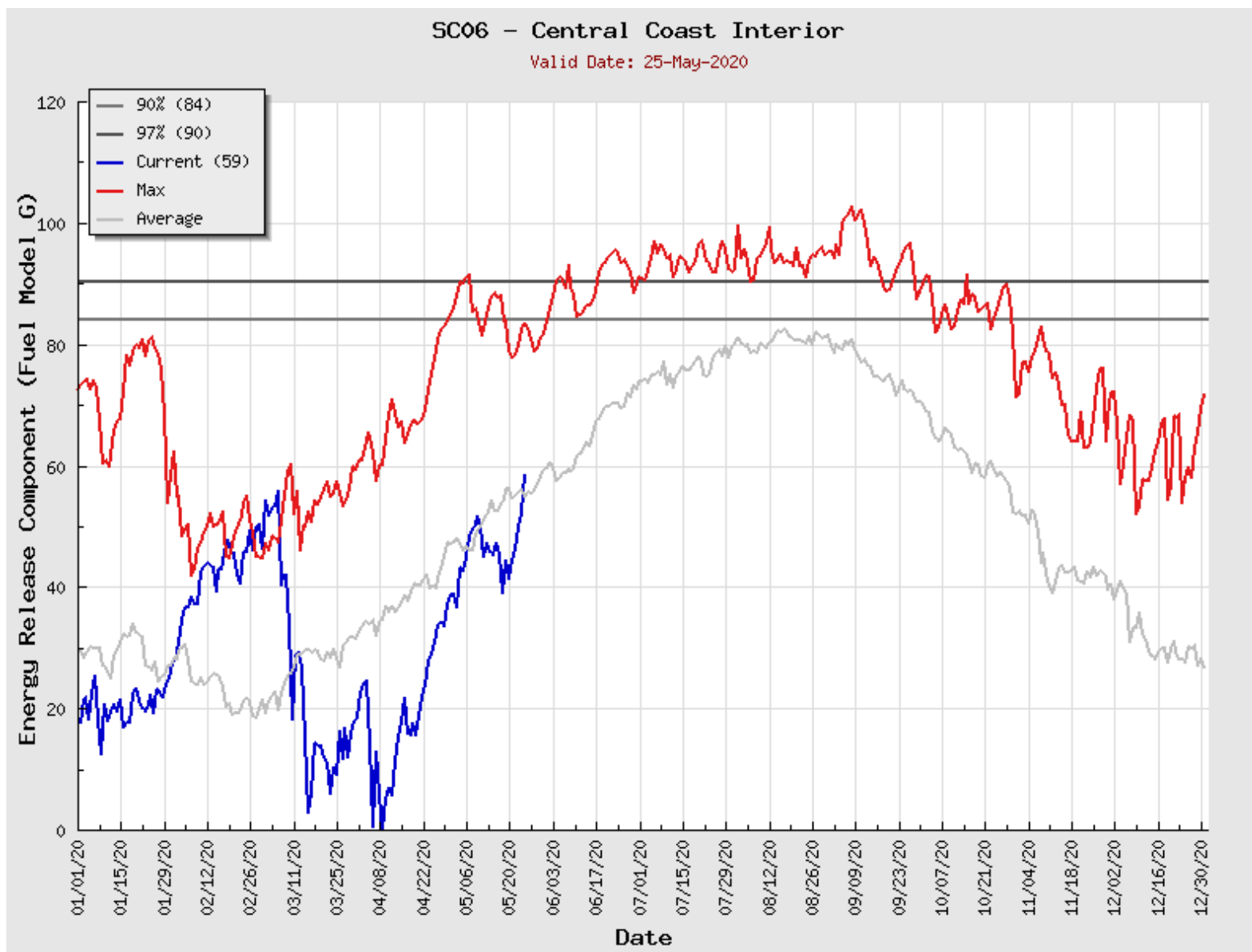
SC06 - Central Coast Interior

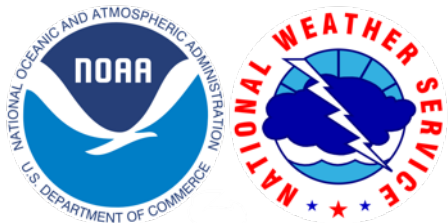
Valid Date: 25-May-2020





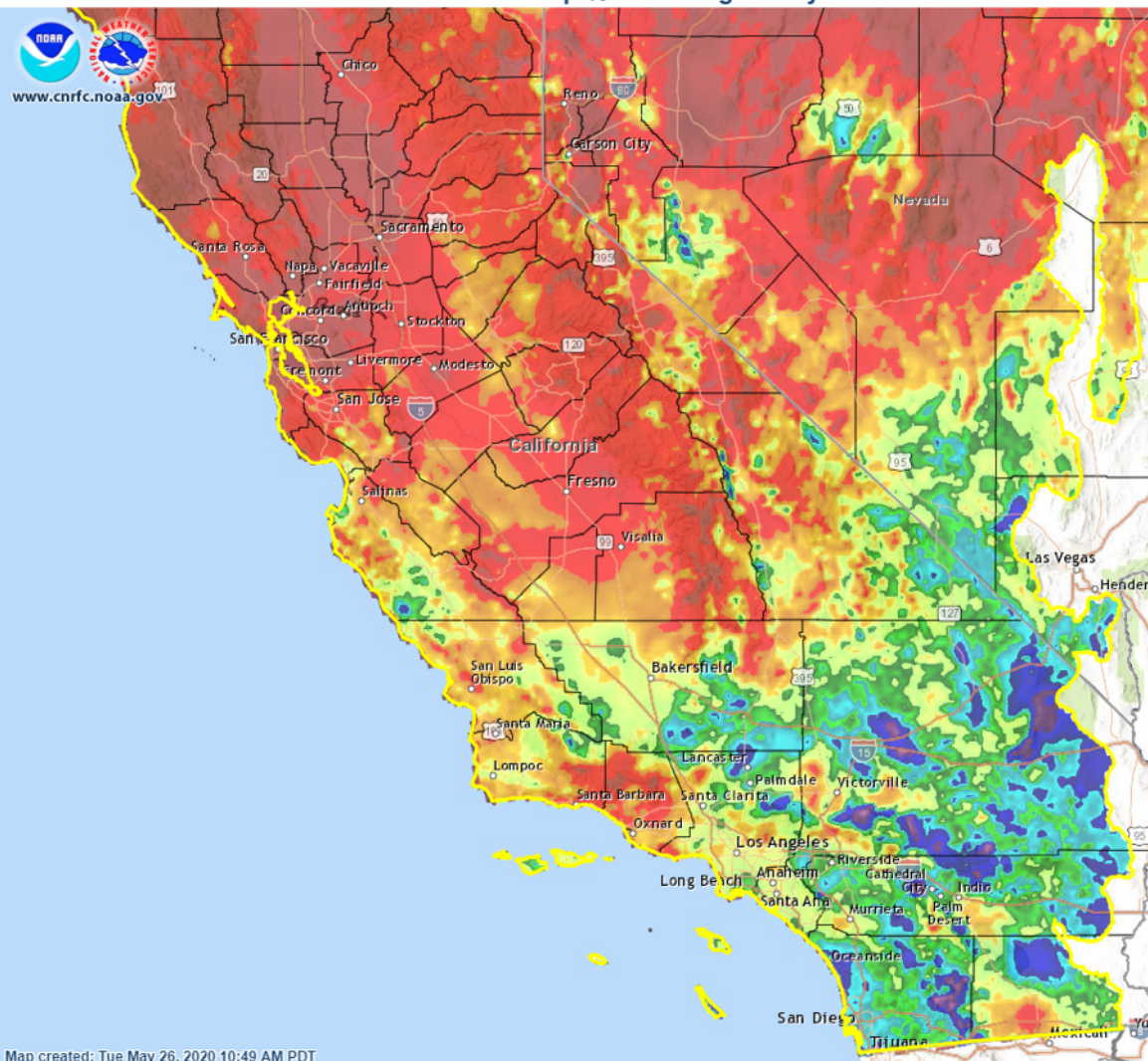
2020 Summer Fire Fuels





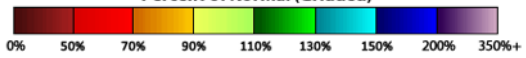
2020 Summer Fire – Drying Fuels

Water Year-to-Date Precip % of Average - May 2020

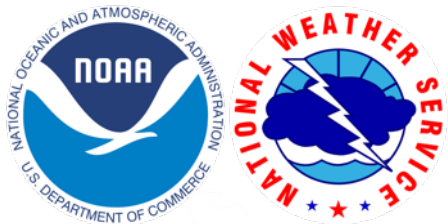


Valid: Tue May 26 2020 at 12:00 PM GMT

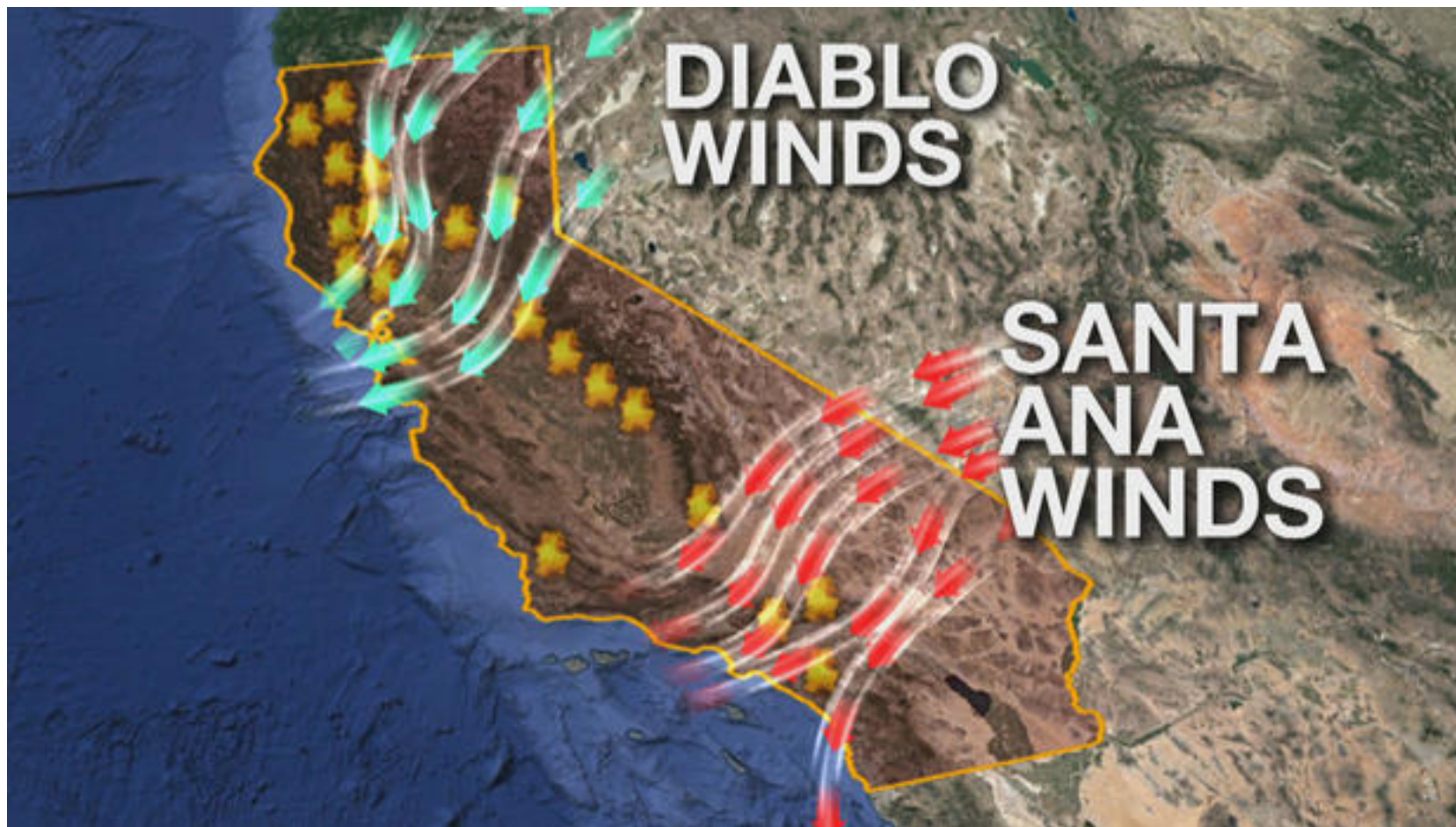
Percent of Normal (Gridded)



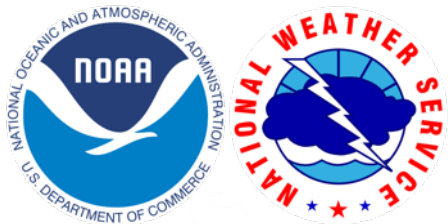
cnrfc.noaa.gov



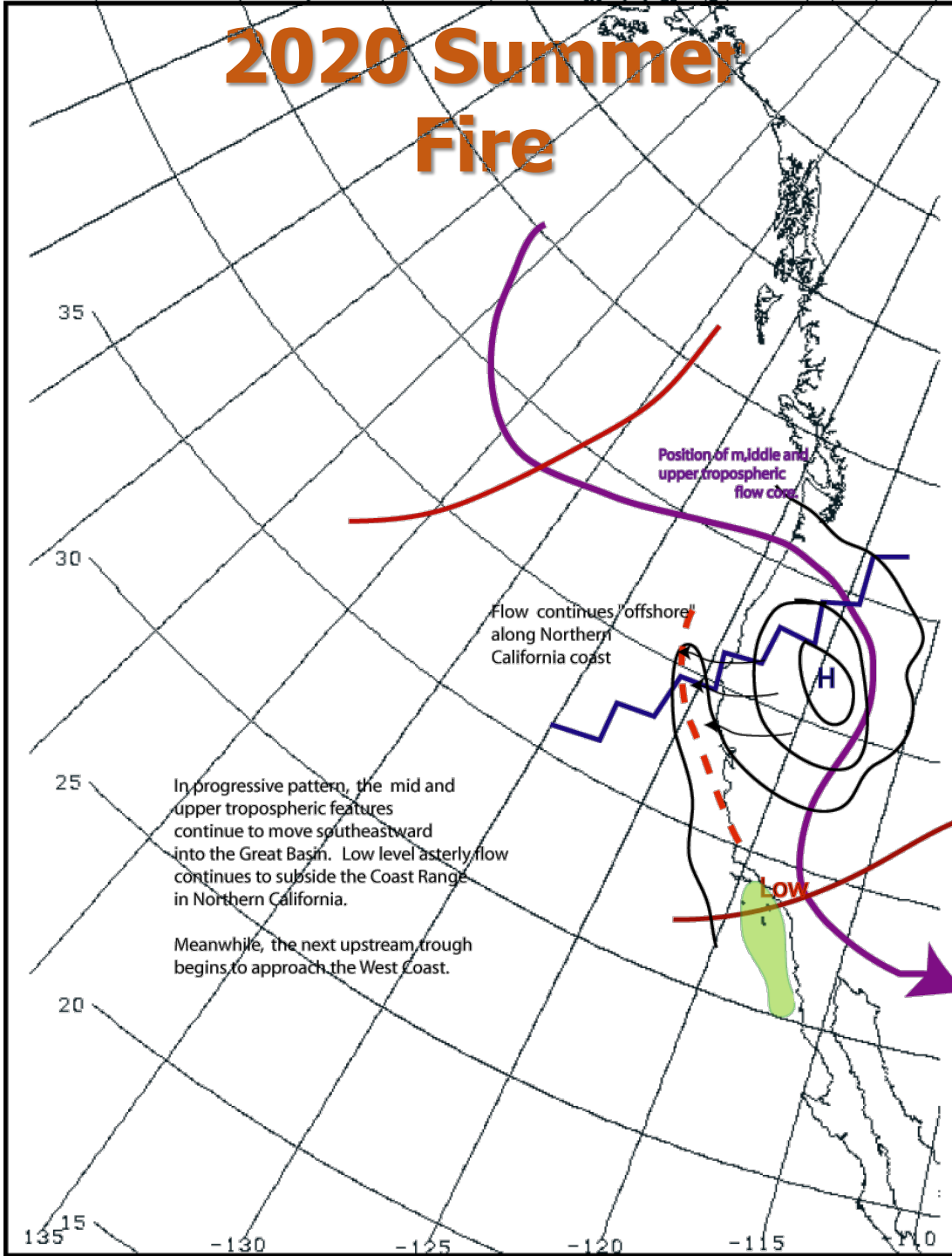
2020 Summer Fire – Offshore Winds

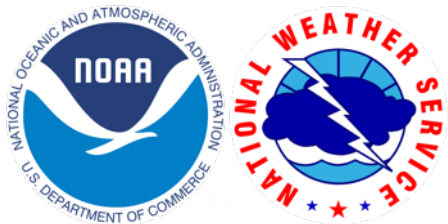


CBS News



2020 Summer Fire

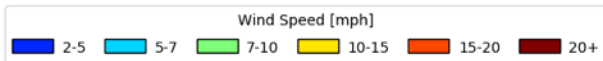
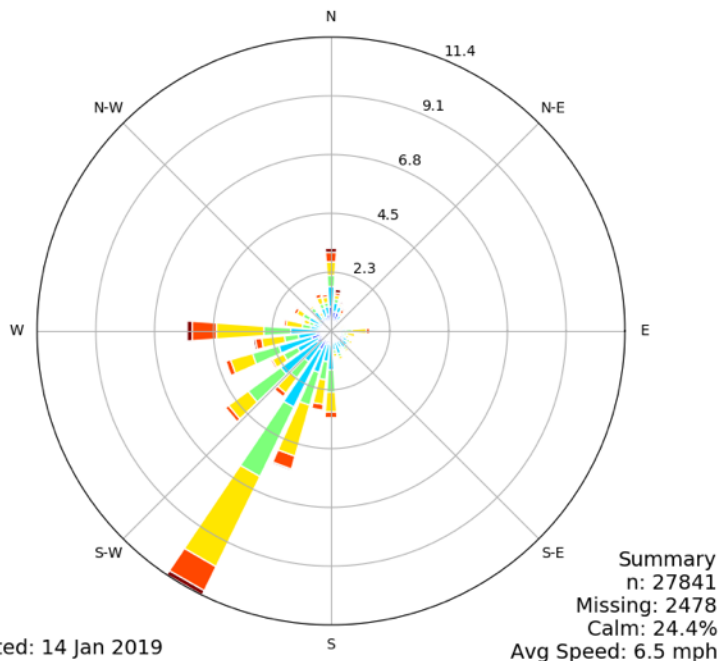




2020 Summer Fire – Offshore Winds



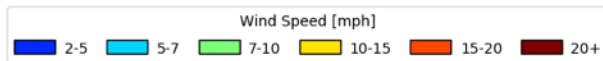
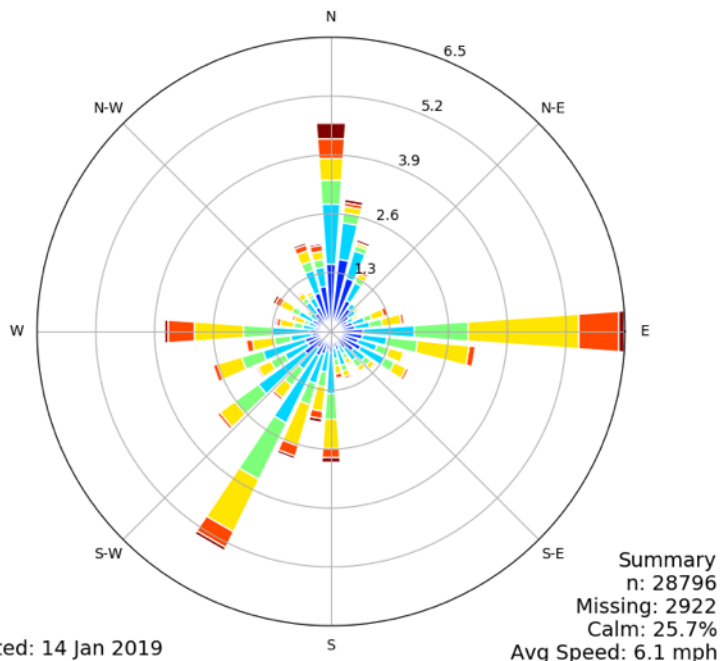
[APC] Napa County
Windrose Plot [Time Domain: Oct,]
Period of Record: 01 Oct 1973 - 31 Oct 2018



Generated: 14 Jan 2019



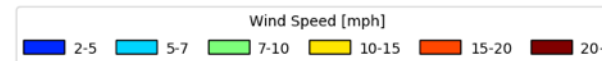
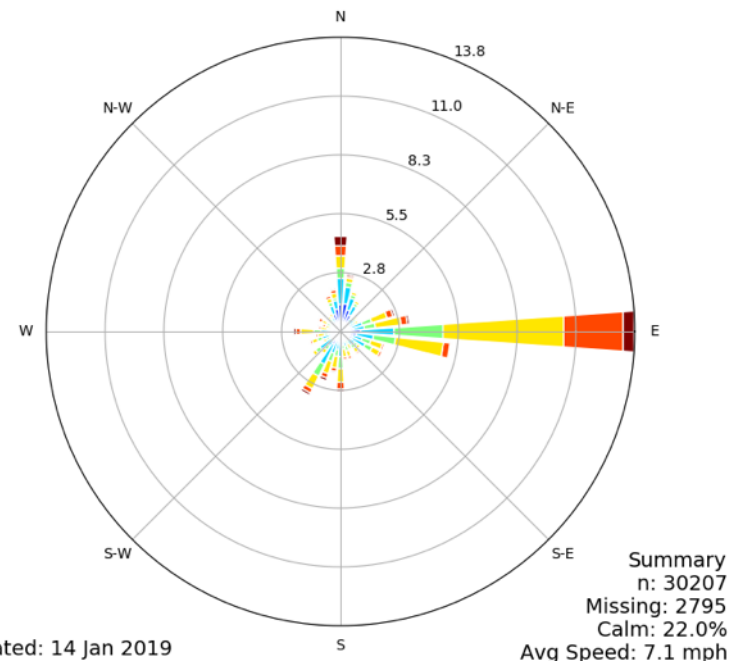
[APC] Napa County
Windrose Plot [Time Domain: Nov,]
Period of Record: 01 Nov 1973 - 30 Nov 2018



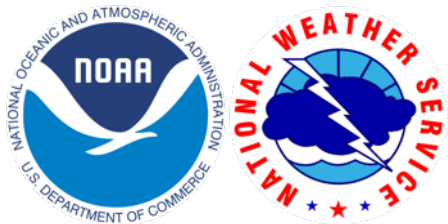
Generated: 14 Jan 2019



[APC] Napa County
Windrose Plot [Time Domain: Dec,]
Period of Record: 01 Dec 1973 - 01 Jan 2019



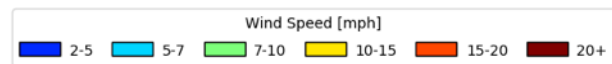
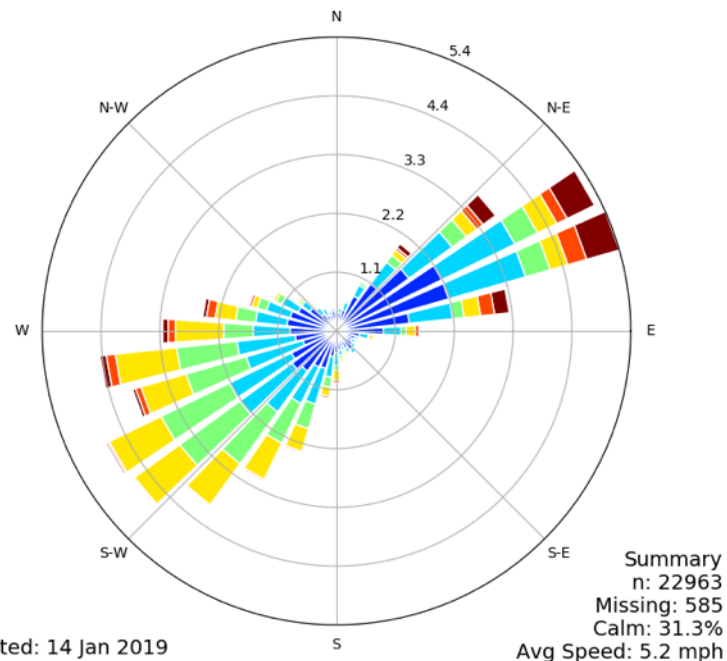
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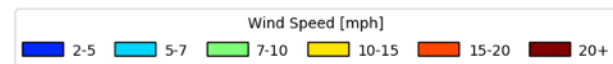
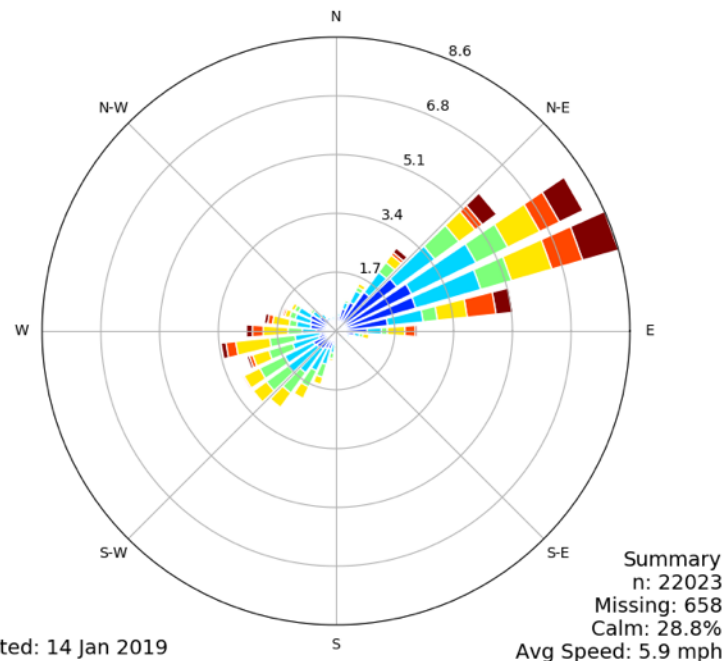
2020 Summer Fire – Offshore Winds



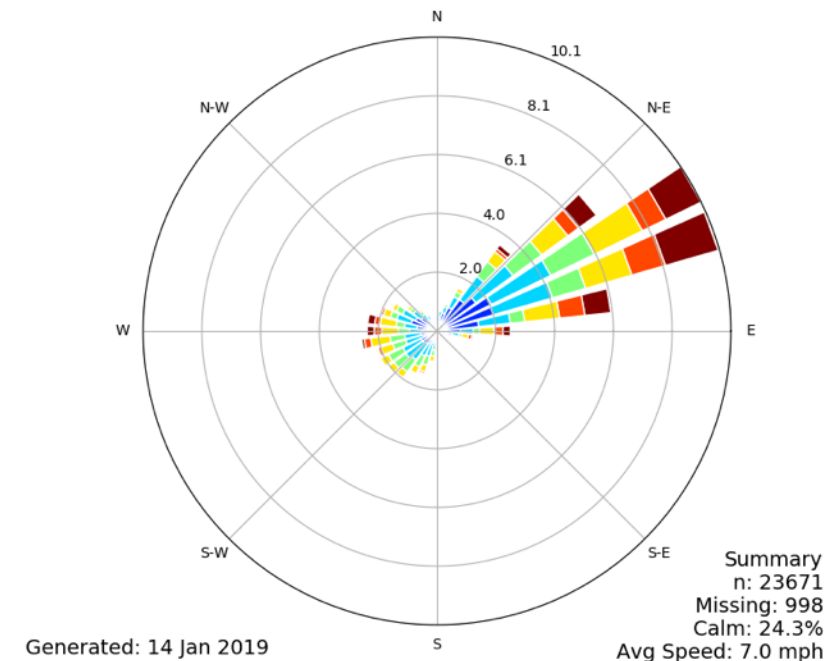
[CMA] CAMARILLO (AWOS)
Windrose Plot [Time Domain: Oct,]
Period of Record: 24 Oct 1973 - 31 Oct 2018

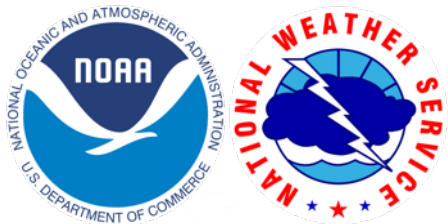


[CMA] CAMARILLO (AWOS)
Windrose Plot [Time Domain: Nov,]
Period of Record: 01 Nov 1973 - 30 Nov 2018



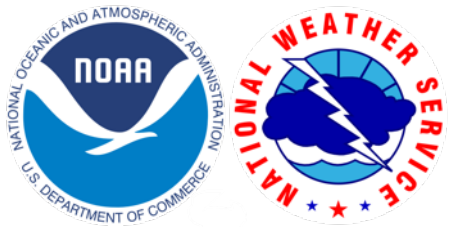
[CMA] CAMARILLO (AWOS)
Windrose Plot [Time Domain: Dec,]
Period of Record: 01 Dec 1973 - 01 Jan 2019





2020 Summer Fire – Safety





2020 Summer Fire – Safety

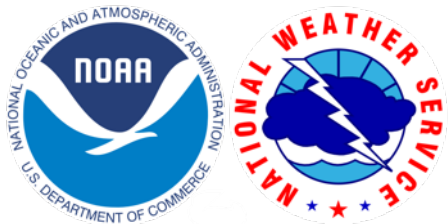


What Does **WEATHER-READY** look like?

Before WILDFIRES

Community members and property owners create a defensible space by clearing brush away from homes and buildings.





2020 Summer Fire – Safety

Prepare for Wildfire with Ready, Set, Go!



CREATE YOUR DEFENSIBLE SPACE

Create and maintain 100 feet of Defensible Space around your home



HARDEN YOUR HOME

Use ember-resistant building materials to protect your home



GET YOUR KIT READY NOW

Create your own emergency supply kit



CREATE YOUR OWN WILDFIRE ACTION PLAN

Develop your family communication and evacuation plans



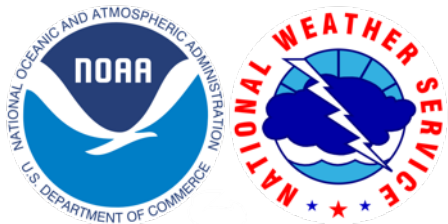
PREPARE NOW!

Wildfire Danger is High! Prepare your Family Now.



READY, SET, GO! CAMPAIGN

Access and request campaign materials and graphics



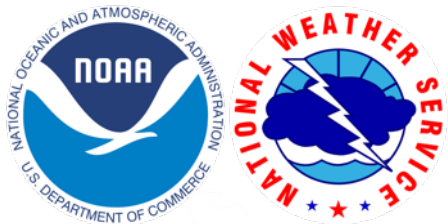
2020 Summer Fire – Red Flag Warning Guidance

Red Flag Guidance/Verification Matrix

The matrix below assume 10-hour fuel moisture of less than 6%, annual grasses are cured, and no wetting rain (greater than 0.10 inch) has fallen in the past 24 hours.

Relative Humidity	Sustained 20 foot Wind Speed (Note: the wind event should be expected to last at least 8 hours)			
	Sustained Wind 6-11 mph	Sustained Wind 12-20 mph	Sustained Wind 21-29 mph	Sustained Wind 30+ mph
<u>Day MIN 29-42%</u> <u>Ngt MAX 61-80%</u>				RED FLAG WARNING
<u>Day MIN 19-28%</u> <u>Ngt MAX 46-60%</u>			RED FLAG WARNING	RED FLAG WARNING
<u>Day MIN 9-18%</u> <u>Ngt MAX 30-45%</u>		RED FLAG WARNING	RED FLAG WARNING	RED FLAG WARNING
<u>Day MIN < 9%</u> <u>Ngt MAX < 30%</u>	RED FLAG WARNING	RED FLAG WARNING	RED FLAG WARNING	RED FLAG WARNING

To help verify Red Flag Warnings the links above will show you what RAWWS sites have met the RFW criteria during the last 24 hours. After clicking on the Day MAX or Ngt MAX RH link double check the times on the observations. Both day and night observations will show up.

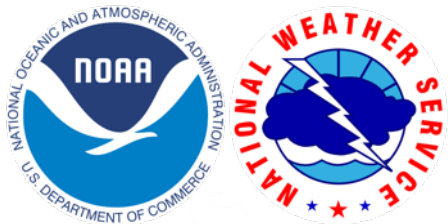


2020 Summer Fire – PSPS

HOW PG&E DECIDED ON MARIN BLACKOUTS

RUSELL
11/21/19
MARIN
INDEPENDENT
JOURNAL





2020 Summer Fire – PSPS



SOUTHERN CALIFORNIA
EDISON®

Energy for What's Ahead®



While no single factor will drive a Public Safety Power Shutoff, some factors include:



A RED FLAG WARNING

declared by the National Weather Service



LOW HUMIDITY LEVELS

generally 20% and below



FORECASTED SUSTAINED WINDS GENERALLY ABOVE 25 MPH AND WIND GUSTS IN EXCESS OF APPROXIMATELY 45 MPH,

depending on location and site-specific conditions such as temperature, terrain and local climate



CONDITION OF DRY FUEL

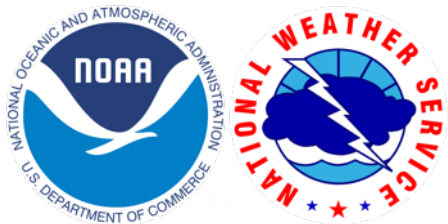
on the ground and live vegetation (moisture content)



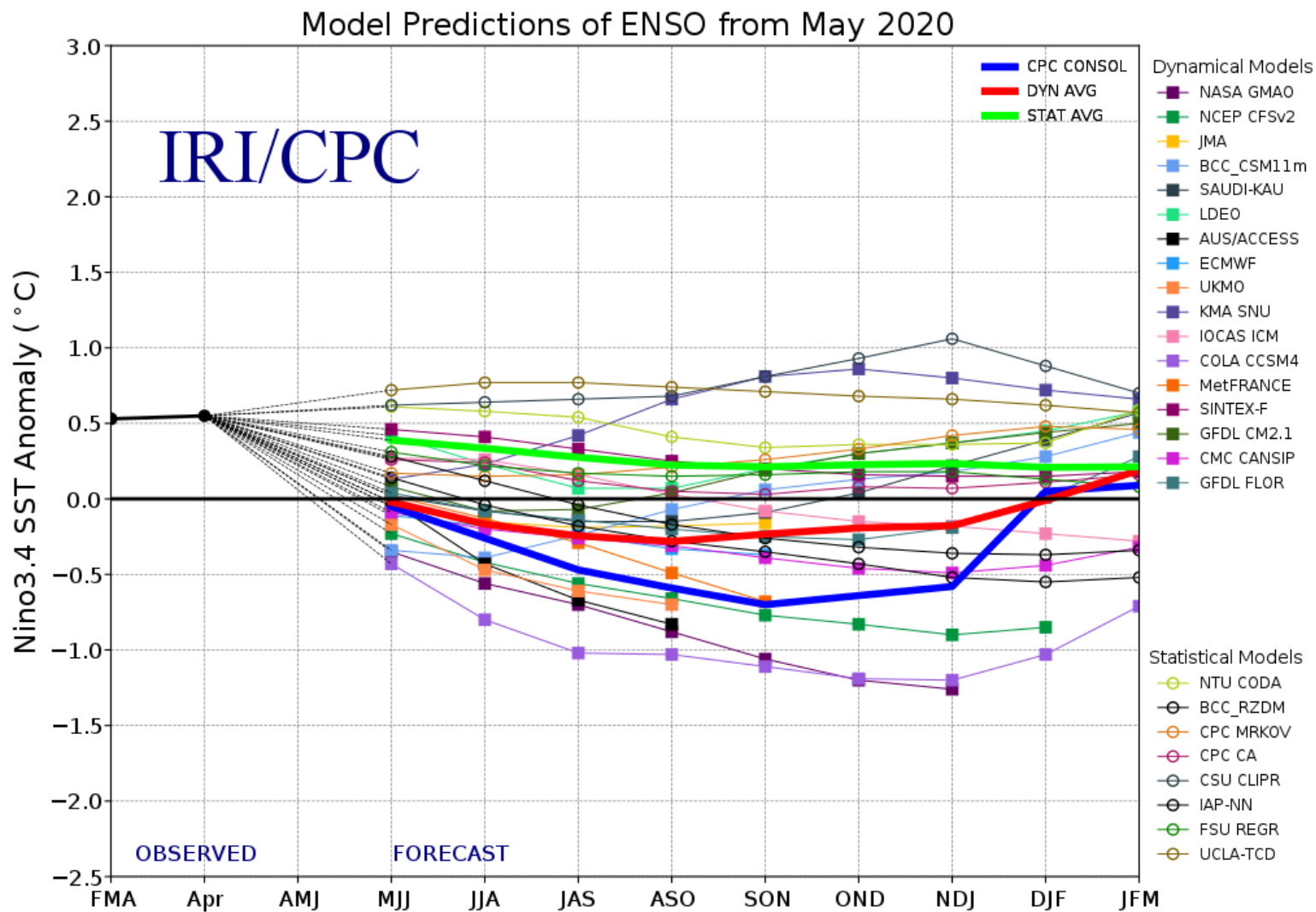
ON-THE-GROUND, REAL-TIME OBSERVATIONS

from PG&E's WSOC and field observations from PG&E crews

For more information contact your utility provider

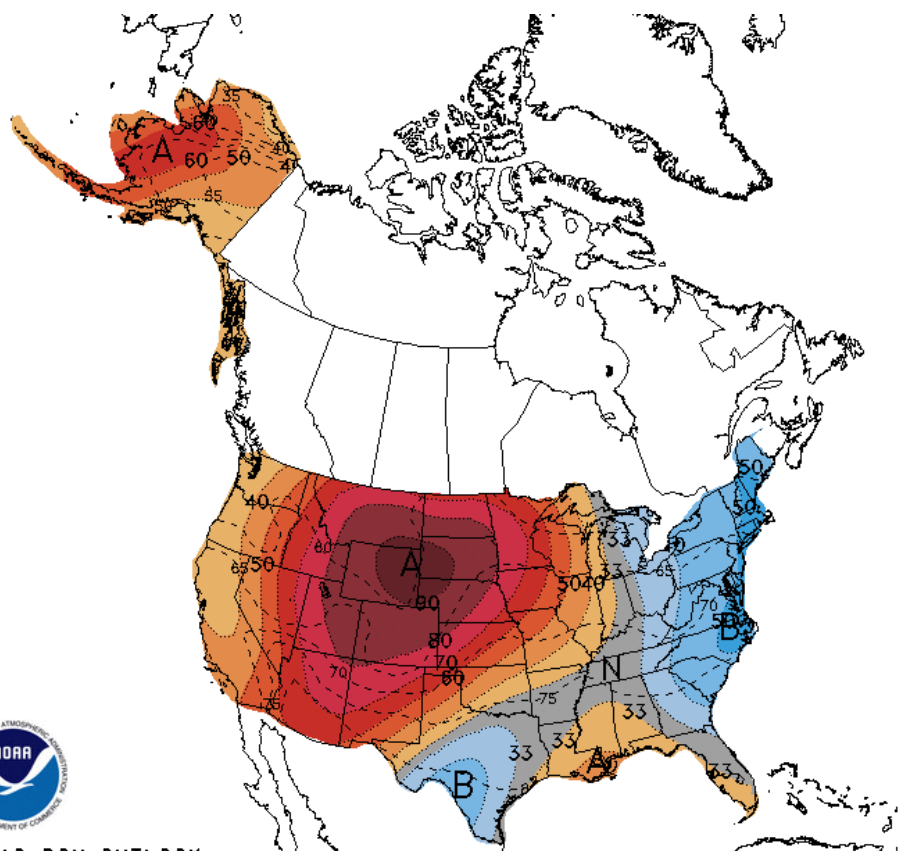


2020 Summer Heat to Fire – ENSO Outlook



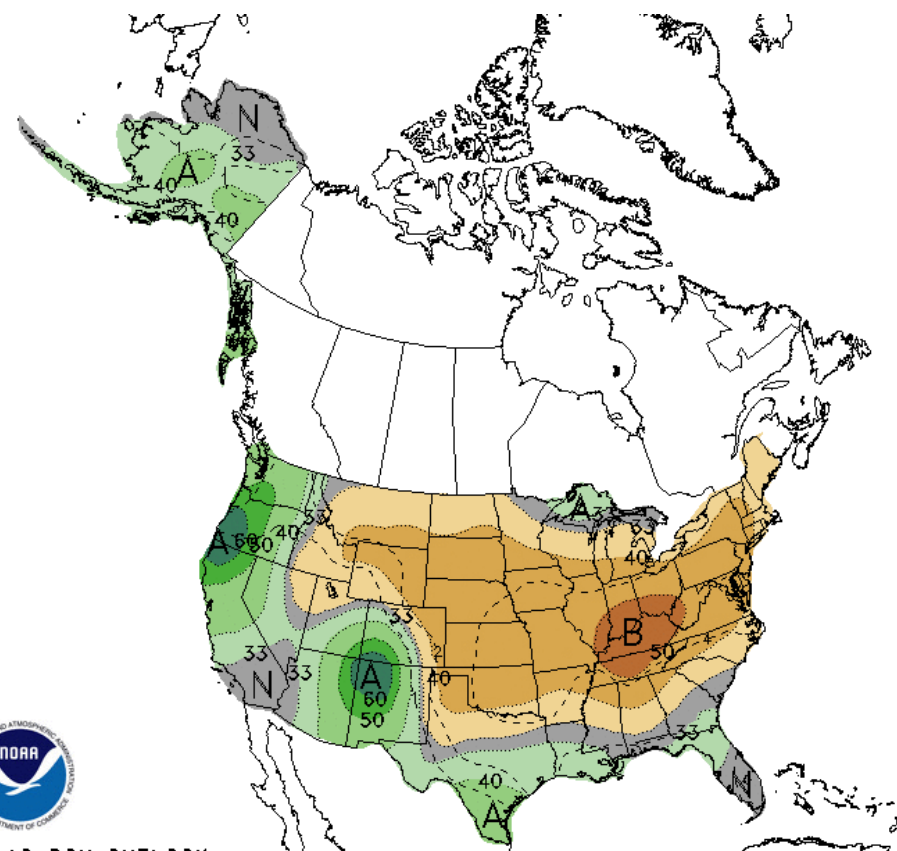
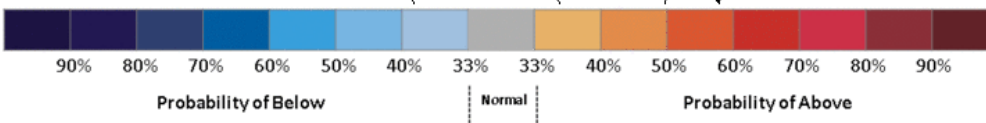


2020 Summer Heat to Fire – Outlook



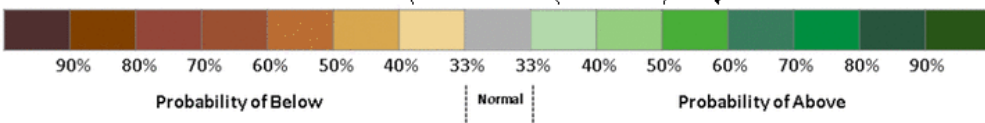
6-10 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 25 MAY 2020
VALID MAY 31 - JUN 04, 2020

DASHED BLACK LINES ARE CLIMATOLOGY (DEG F). SHADED AREAS ARE FCSST VALUES ABOVE (A) OR BELOW (B) NORMAL. GRAY AREAS ARE NEAR-NORMAL.

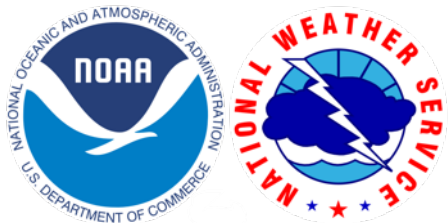


6-10 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 25 MAY 2020
VALID MAY 31 - JUN 04, 2020

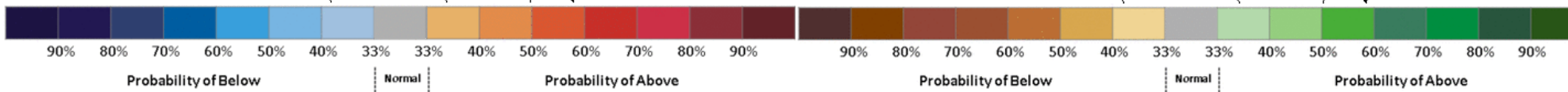
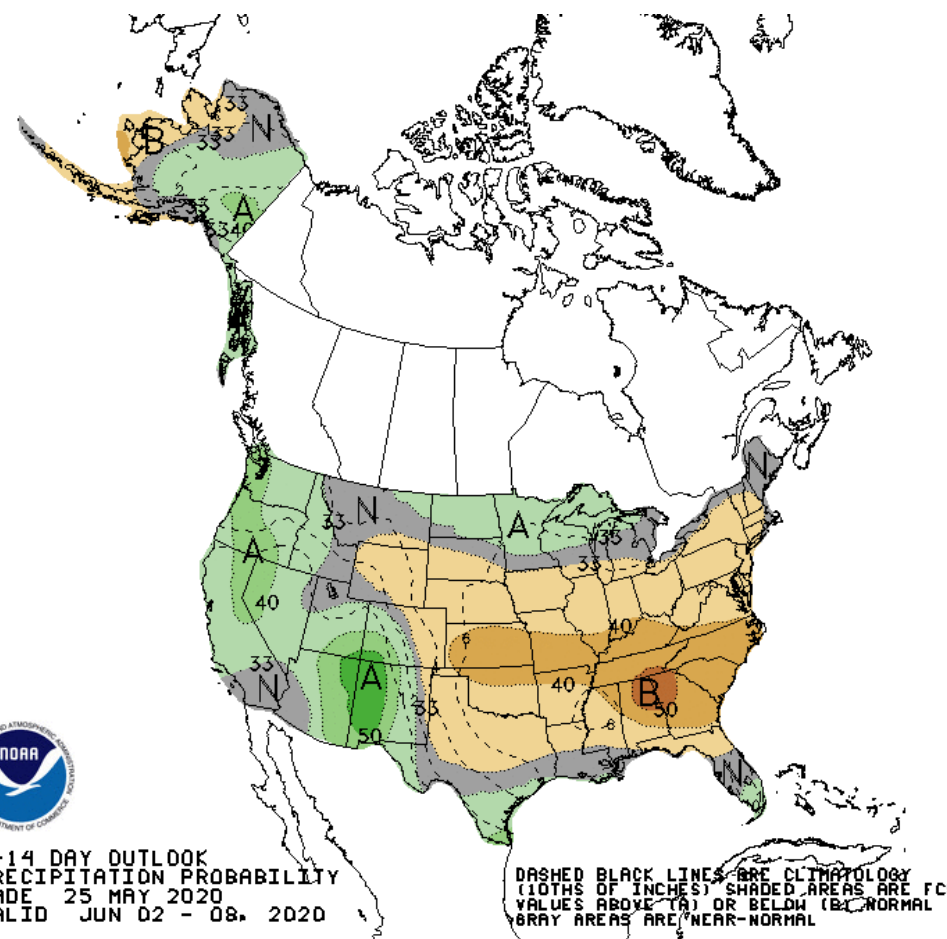
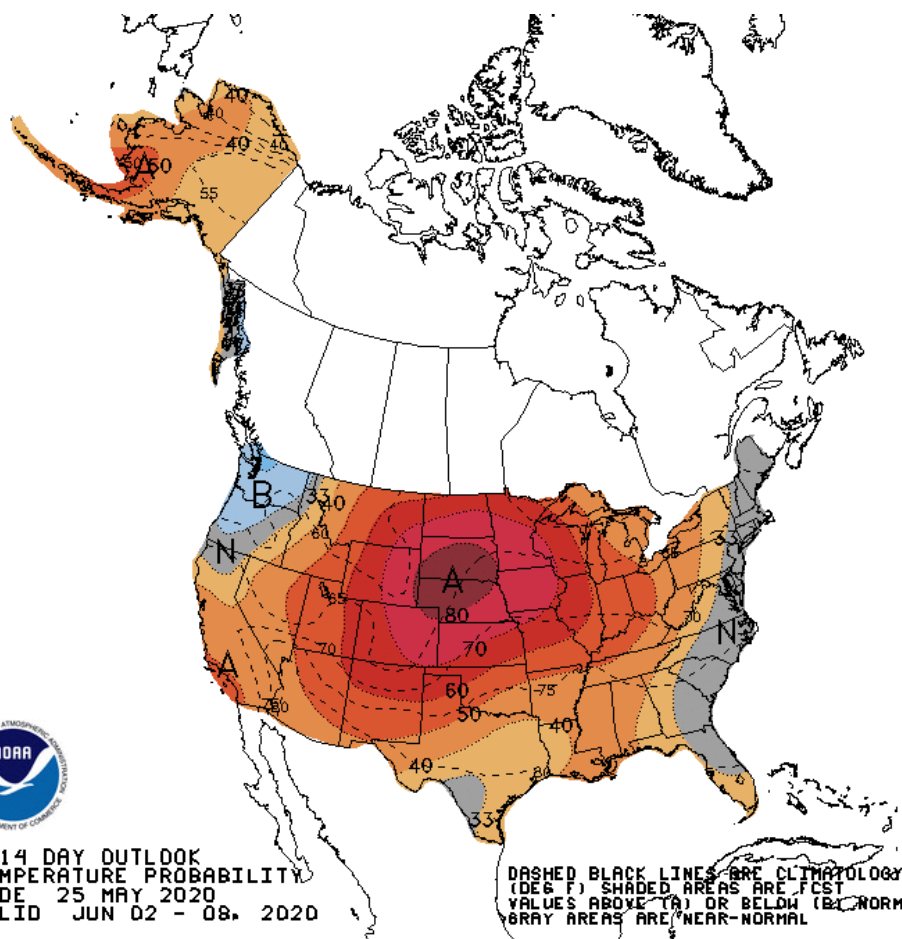
DASHED BLACK LINES ARE CLIMATOLOGY (TENTHS OF INCHES). SHADED AREAS ARE FCSST VALUES ABOVE (A) OR BELOW (B) NORMAL. GRAY AREAS ARE NEAR-NORMAL.



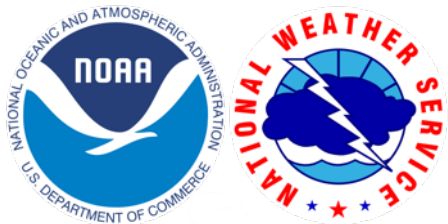
cpc.ncep.noaa.gov



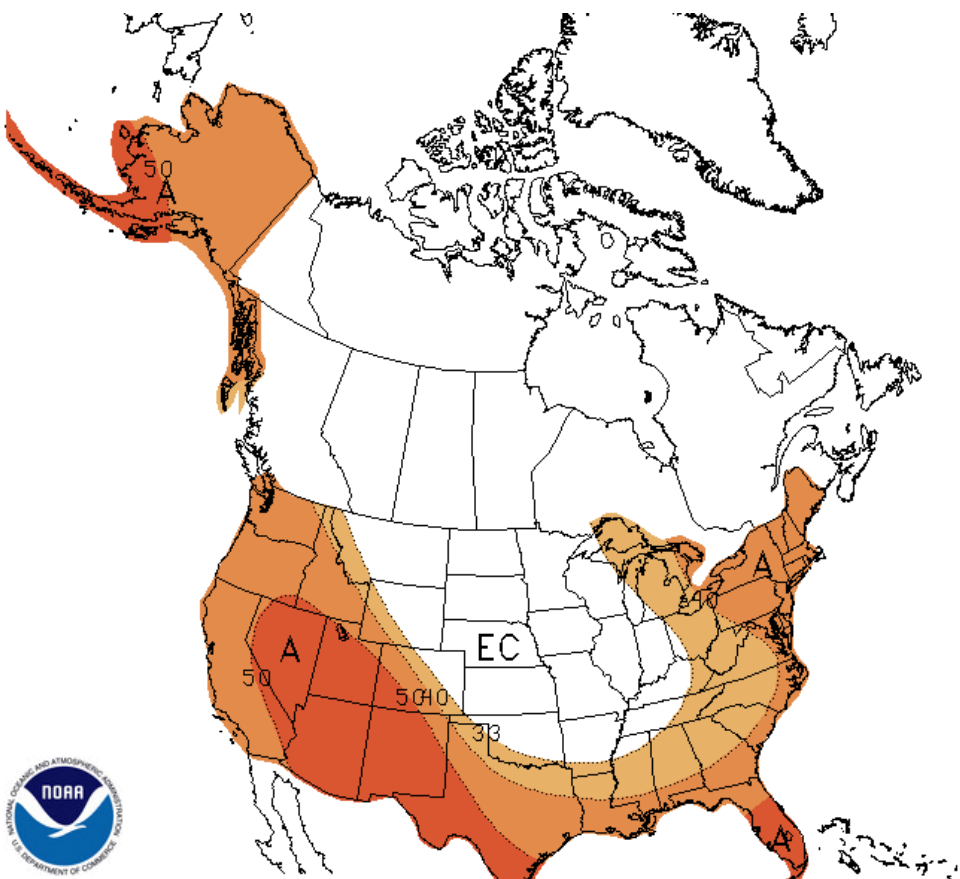
2020 Summer Heat to Fire – Outlook



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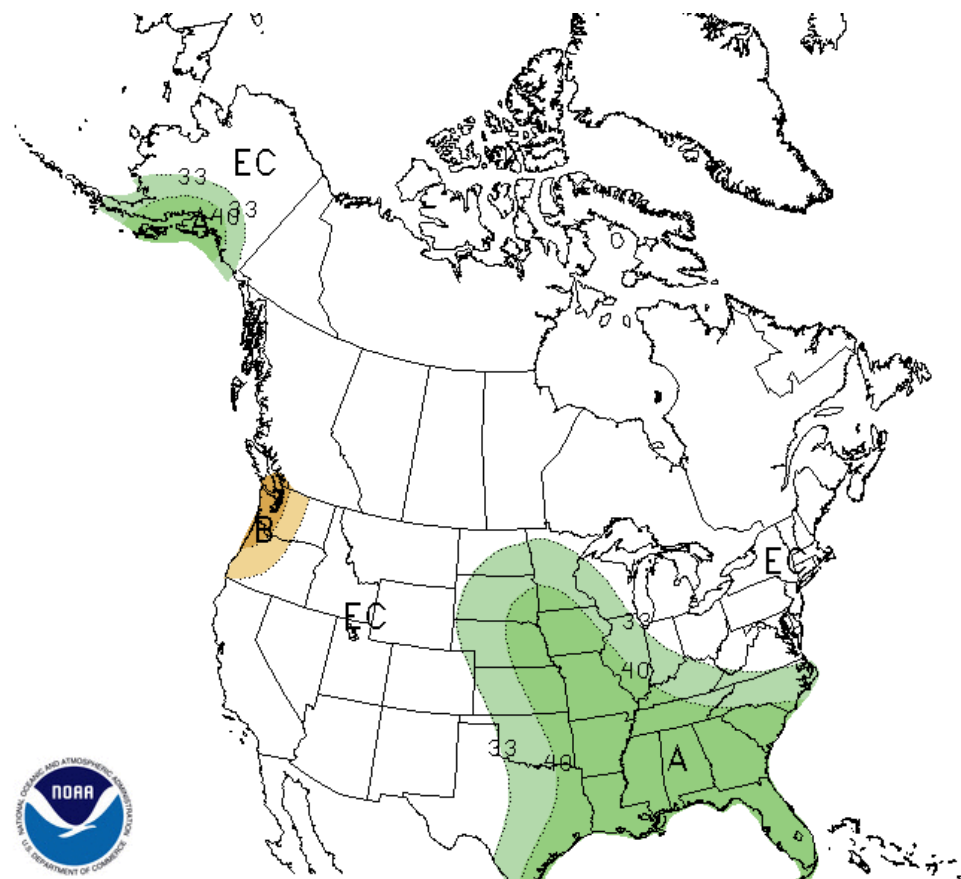


2020 Summer Heat to Fire – Outlook



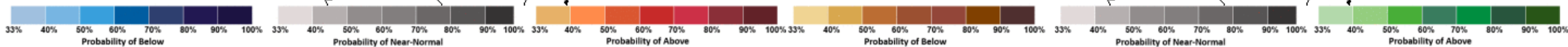
ONE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID JUN 2020
MADE 21 MAY 2020

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW



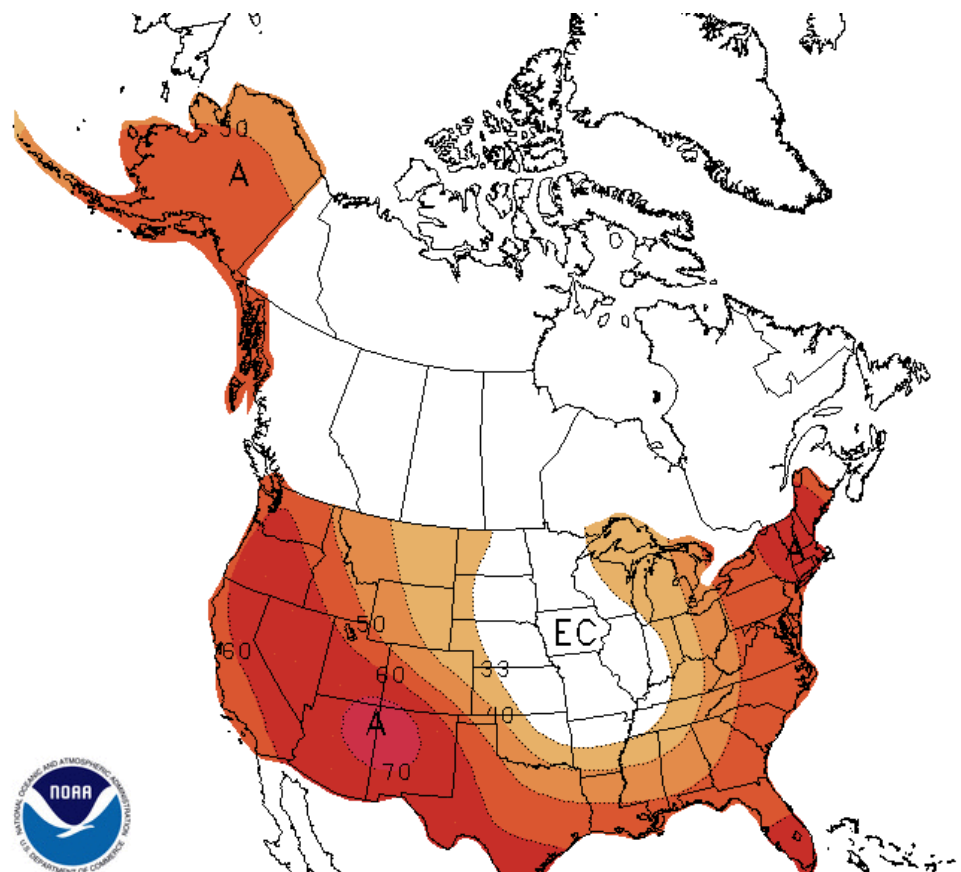
ONE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
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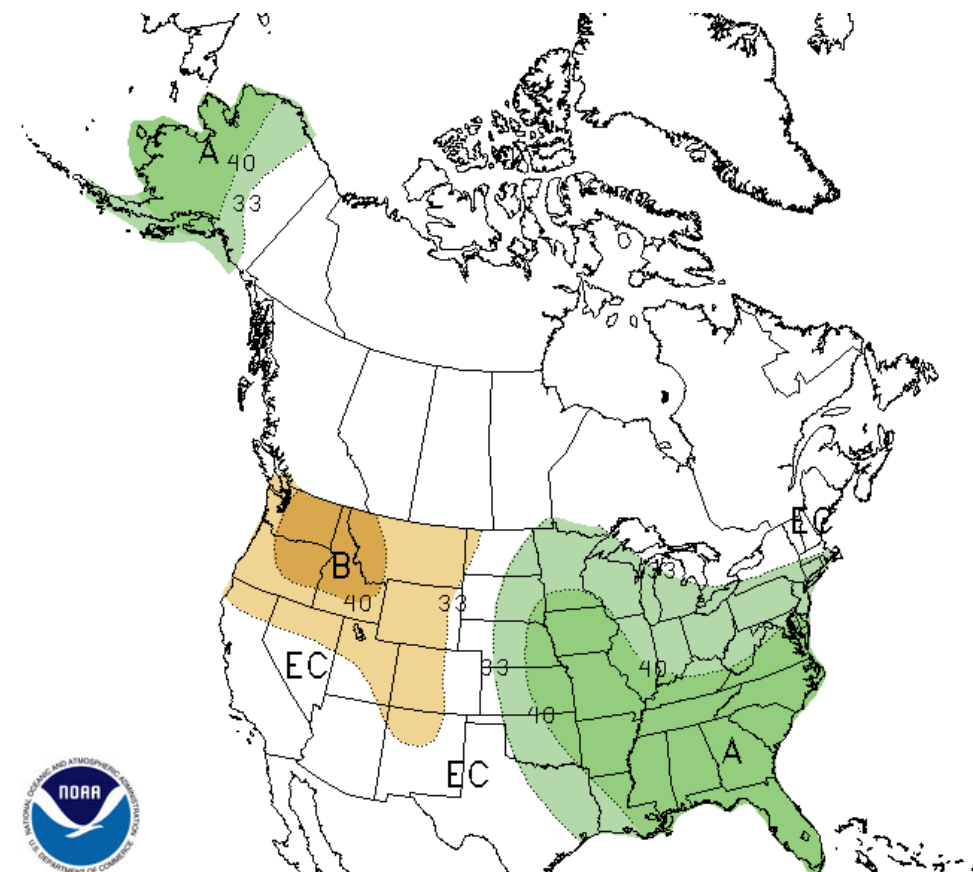


2020 Summer Heat to Fire – Outlook



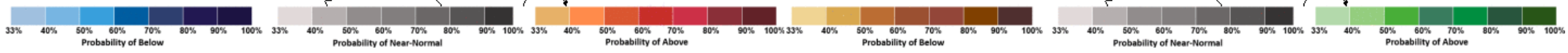
THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID JJA 2020
MADE 21 MAY 2020

EC MEANS EQUAL
CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW

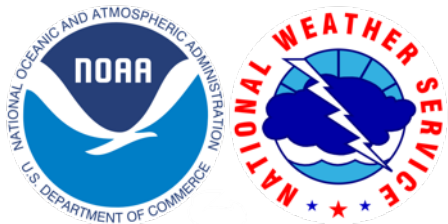


THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID JJA 2020
MADE 21 MAY 2020

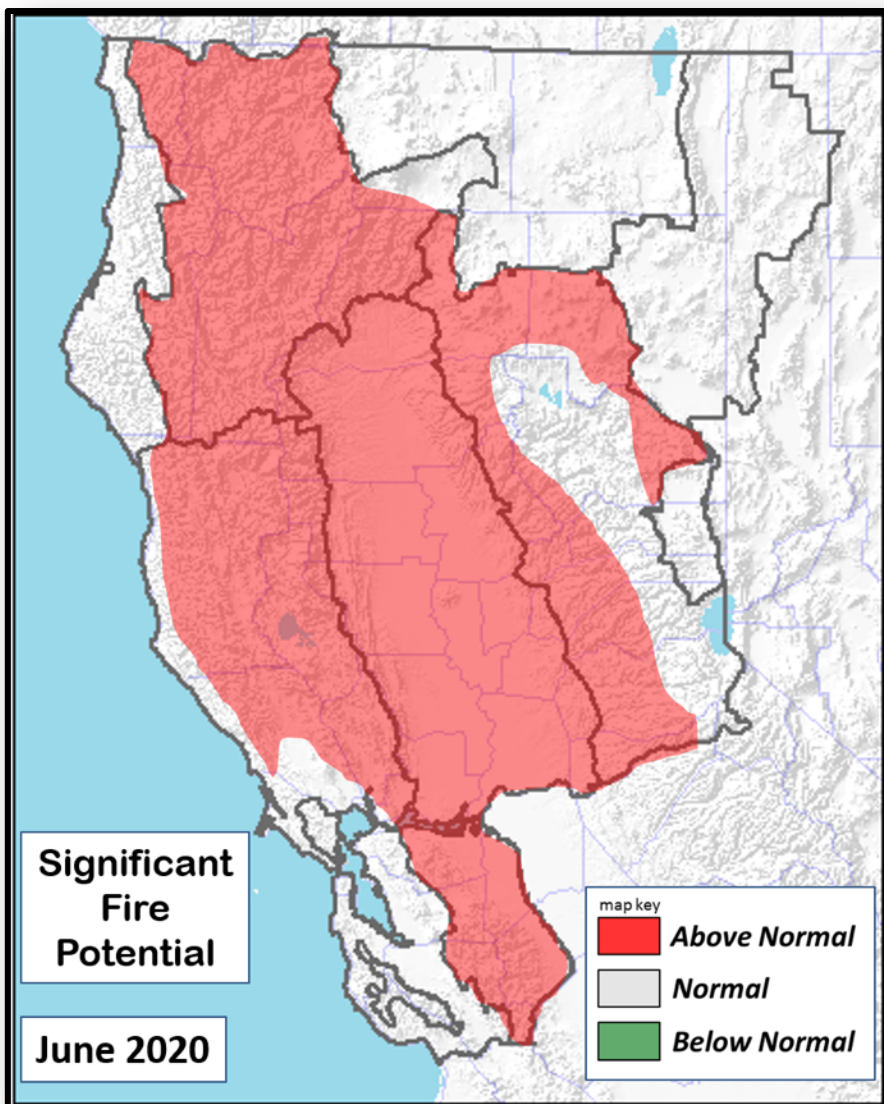
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2020 Summer Heat to Fire – Outlook



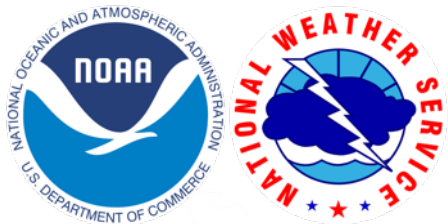
Above Normal Significant Fire Potential most areas west of the Cascade-Sierra crest

Normal elsewhere

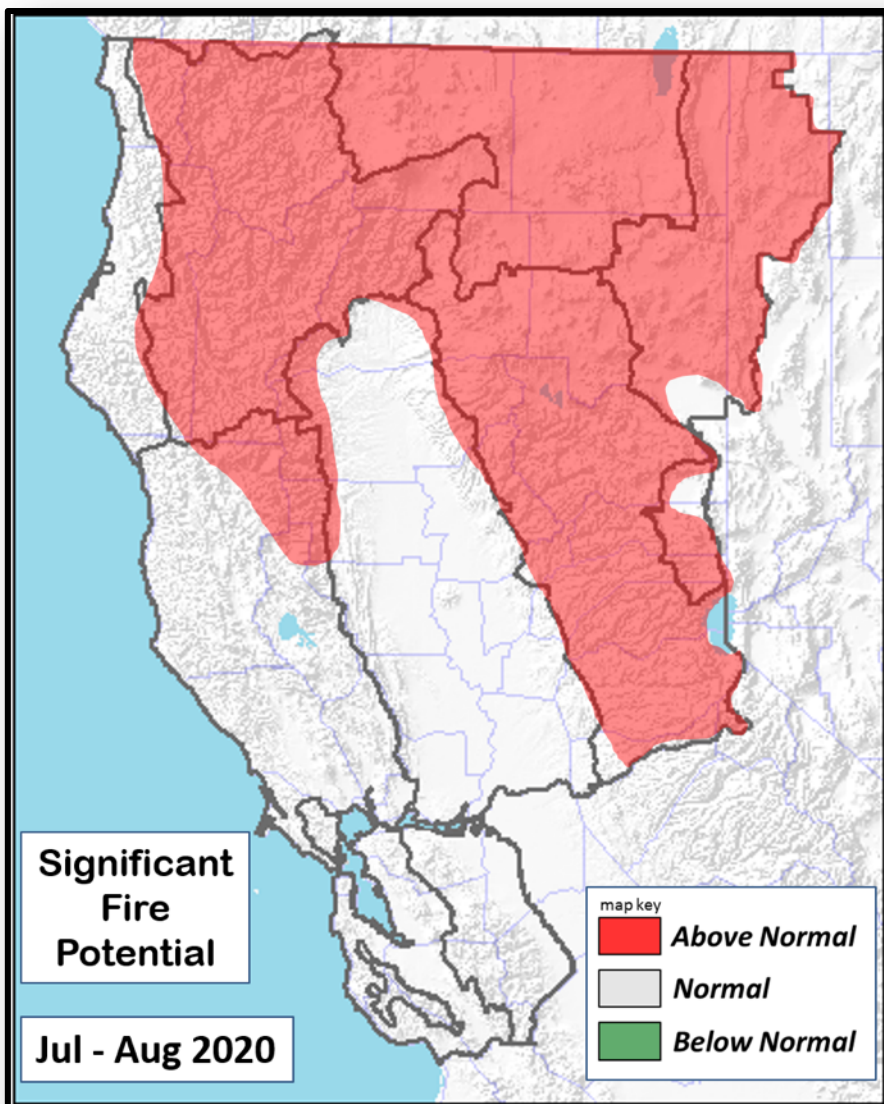
Warmer and drier than avg. with more offshore wind than normal

Occasional weather systems producing lightning

Snow Pack melting off by early June. Little runoff



2020 Summer Heat to Fire – Outlook

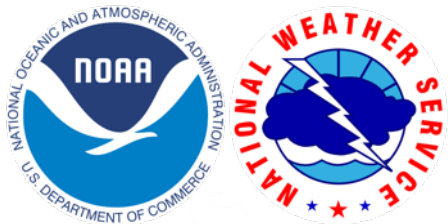


**Above Normal Significant
Fire Potential above 3000 ft**

Normal elsewhere

**Warmer and drier than
average**

**Below normal amount of
lightning, but very dry fuels
vulnerable to any strikes**



2020 Summer Heat to Fire – Outlook

SOUTHERN OPERATIONS

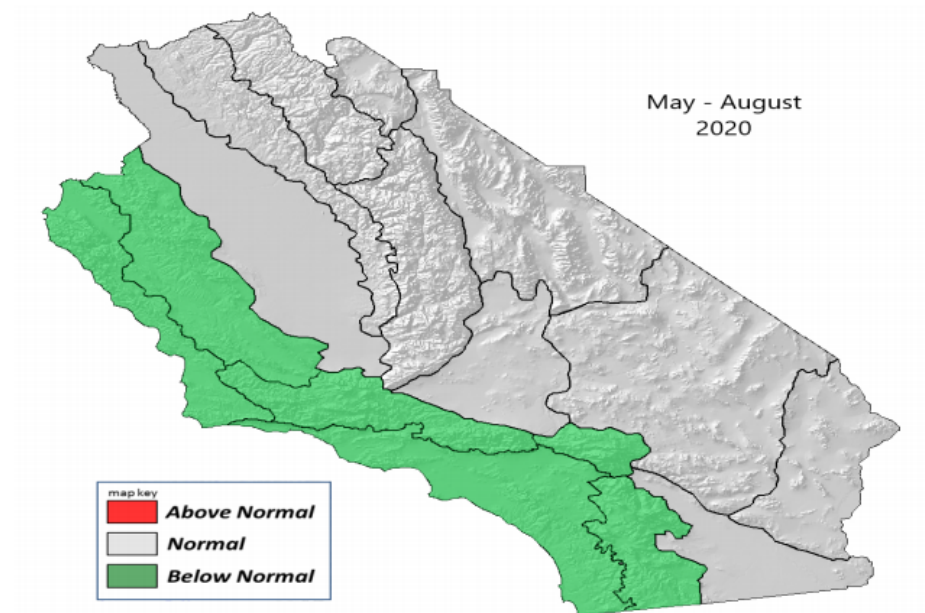
MONTHLY/SEASONAL OUTLOOK

ISSUED MAY 1, 2020

VALID MAY - AUGUST 2020

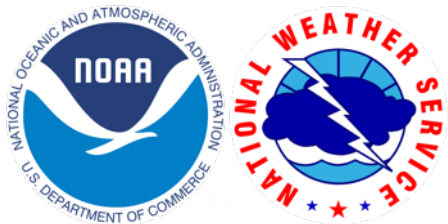


SIGNIFICANT FIRE POTENTIAL



May - August 2020 HIGHLIGHTS

- *Temperatures a little below normal through August.*
- *Near normal rainfall through June.*
- *Deeper marine layer than normal through August.*
- *Less monsoonal thunderstorms than normal July and August.*

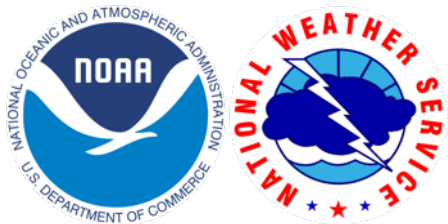


2020 Summer Heat to Fire – Discussion and Outlook



Thanks for listening – Any questions?

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Weather Ready Nation Ambassador

Join us as a **AMBASSADOR** **WRN** and be a force
of Nature
WEATHER-READY NATION™

Ready, Responsive, Resilient

Take a few minutes and [sign up](#) Today!

For more information contact Brian Garcia @

brian.garcia@noaa.gov