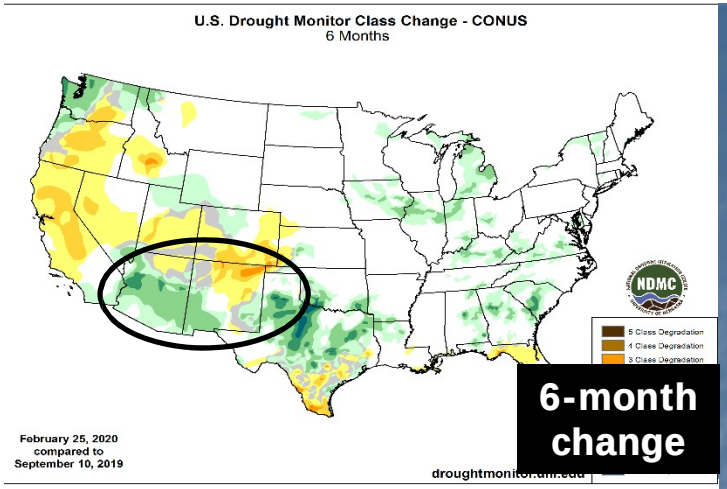
2020 Fire Season Considerations and Outlook

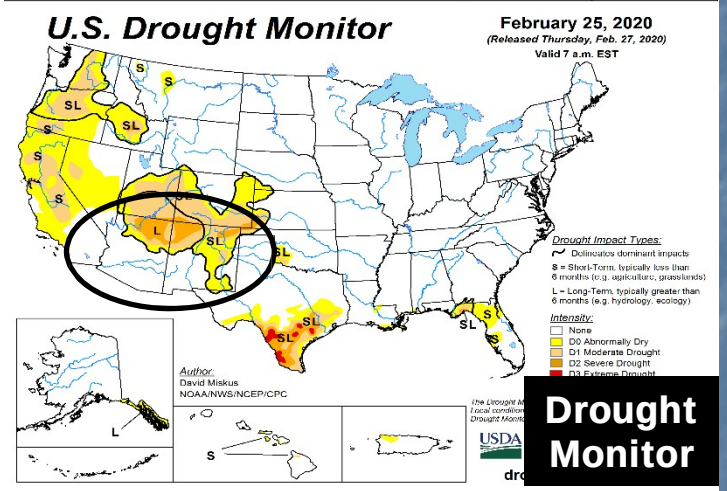
SWCC Predictive Services

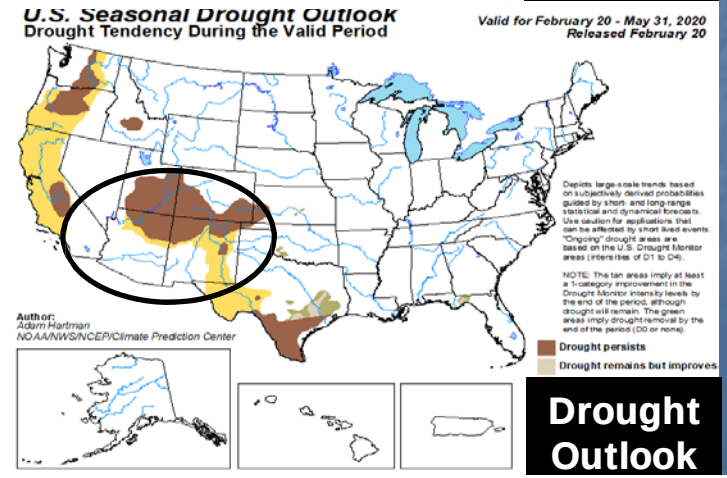
Updated: 2/28/20

Seasonal Fire Potential Main Factors

1. Drought — Big Picture Fuels Complex Conditions
2. Fine Fuels Condition — Fine Fuels Component
3. Seasonal Temperature & Precipitation — Season Setup
4. Spring & early Summer Weather Patterns — Fire Ignition & Spread
5. Monsoon — Season End



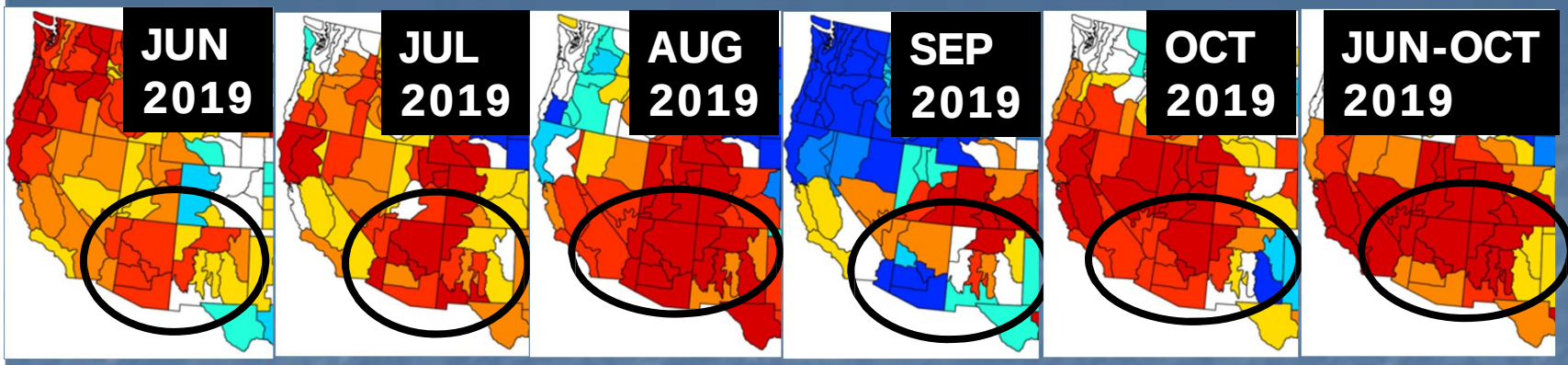




Fire Season 2020: Drought

- Up/down drought over the past 6 months...definite increase north
- "Severe Drought" across northeast AZ / northwest NM with moderate drought surrounding this region eastward into northeastern NM
- Official Drought outlook – to persist overall across northern sections at least through April
- Drought that exists impacting mainly heavier fuels from northeastern AZ into northern NM - longer-term issues (hydro), shorter-term (lee of NM cntrl mtns)

Fire Season 2020: Fine Fuels



- Below Normal carry-over overall of warm-season fine fuels driven by low 2019 main growing season (JUL-SEP) precipitation totals
- Carr RAWS saw 31" in '19, however 60% of it occurred outside of Jul-Sep
- Despite poor precipitation last summer & fall, the recent and continued up-down weather pattern will likely contribute to widespread spring green-up
- **Minimum carry-over fine fuels + decent spring growth = potentially significant amount of fine fuels to potentially carry fire in some areas…but likely not as noteworthy compared to past**
- **Fine fuel loading and continuity is <u>normal to Below Normal</u>, *esp. across the northern half or so of Arizona and the western ½ of NM***

North End of White Sands Missile Range – 2/10/20

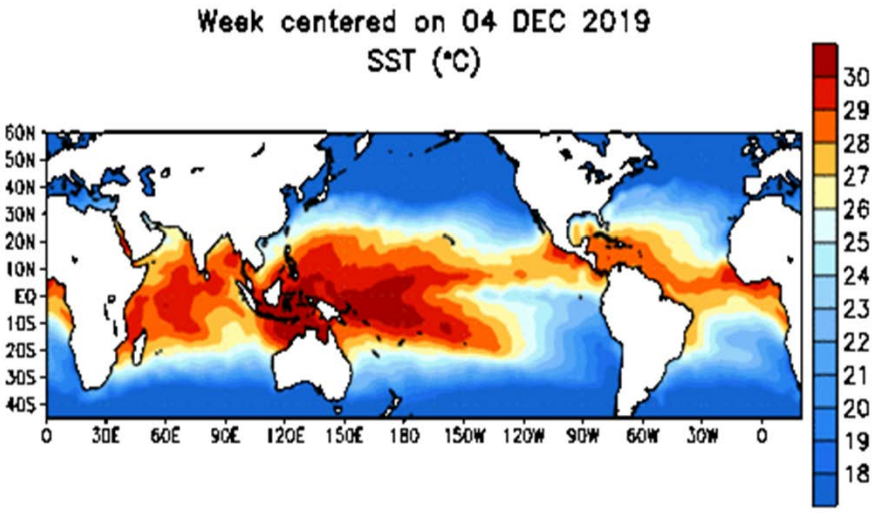
BLM – Socorro District

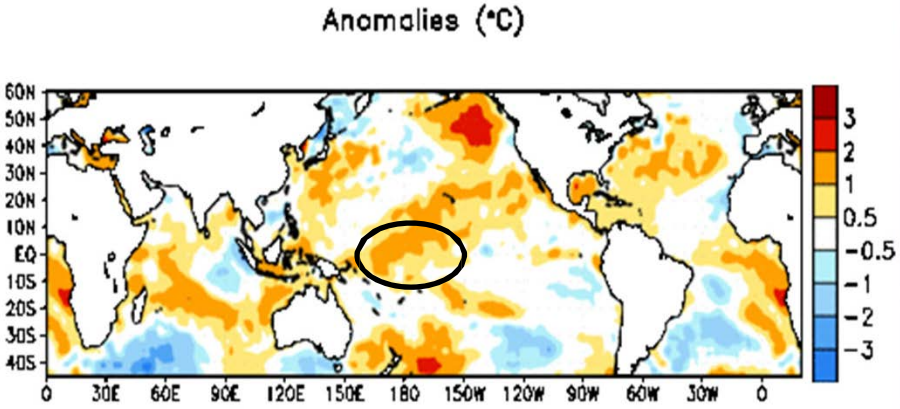
2/11/20

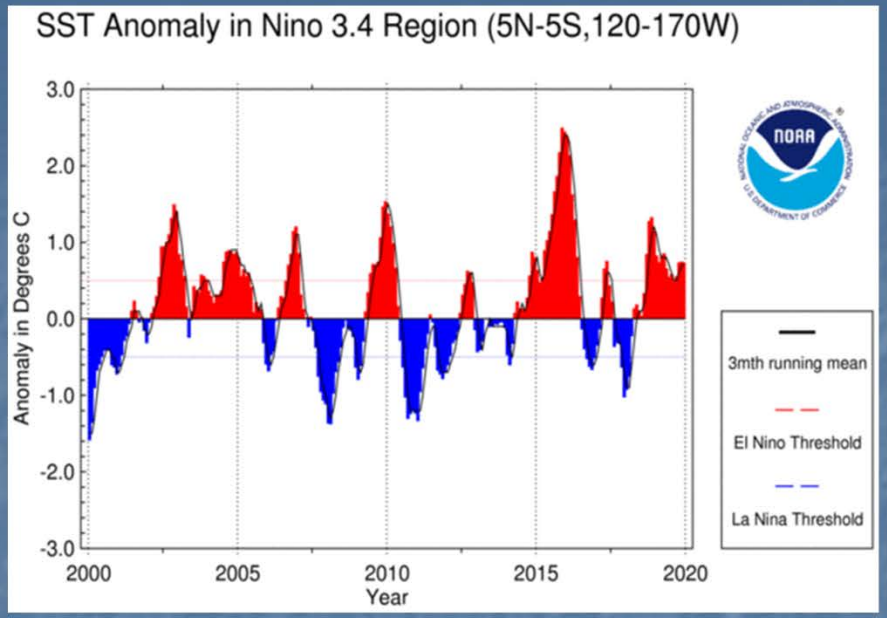
Near Bingham, NM

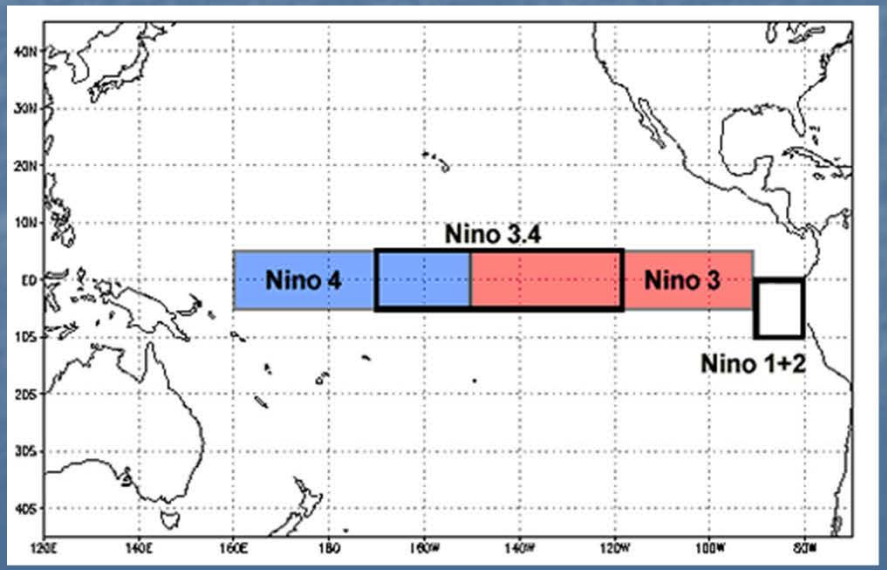
Highway 286 – Buenos Aires NWR, southeastern AZ

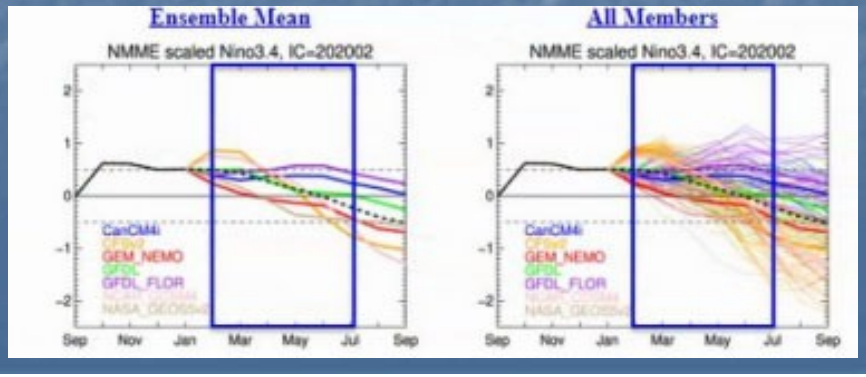
~ Late January

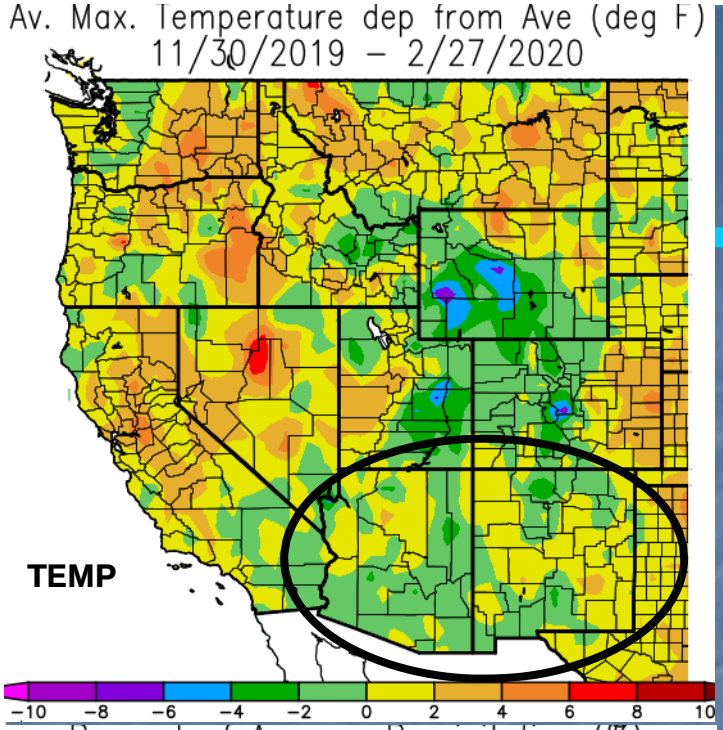

Week centered on 04 DEC 2019
SST (°C)
30
29
28
27
26
25
24
23
22
21
20
19
18

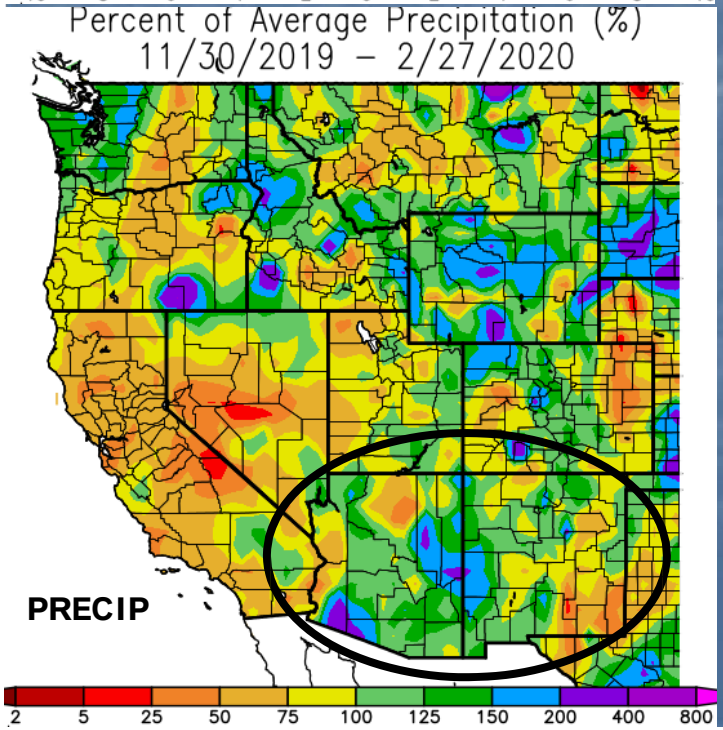

Anomalies (°C)
3
2
1
0.5
-0.5
-1
-2
-3


SST Anomaly in Nino 3.4 Region (5N-5S,120-170W)
Anomaly in Degrees C
Year
3mth running mean
El Nino Threshold
La Nina Threshold


Nino 4
Nino 3.4
Nino 3
Nino 1+2


Ensemble Mean
All Members
NMME scaled Nino3.4, IC=202002
CanCM4i
GEM_NEMO
GFDL
GFDL_FLOR



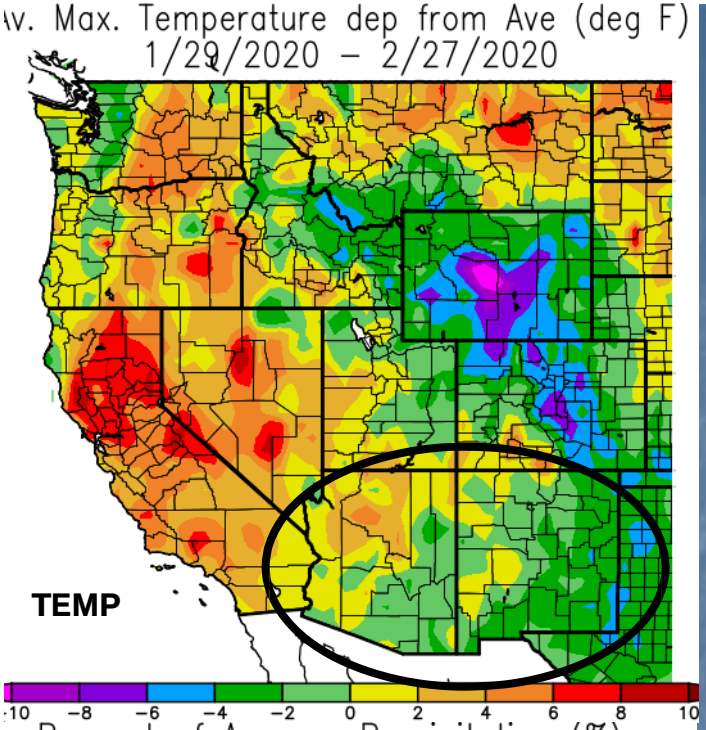


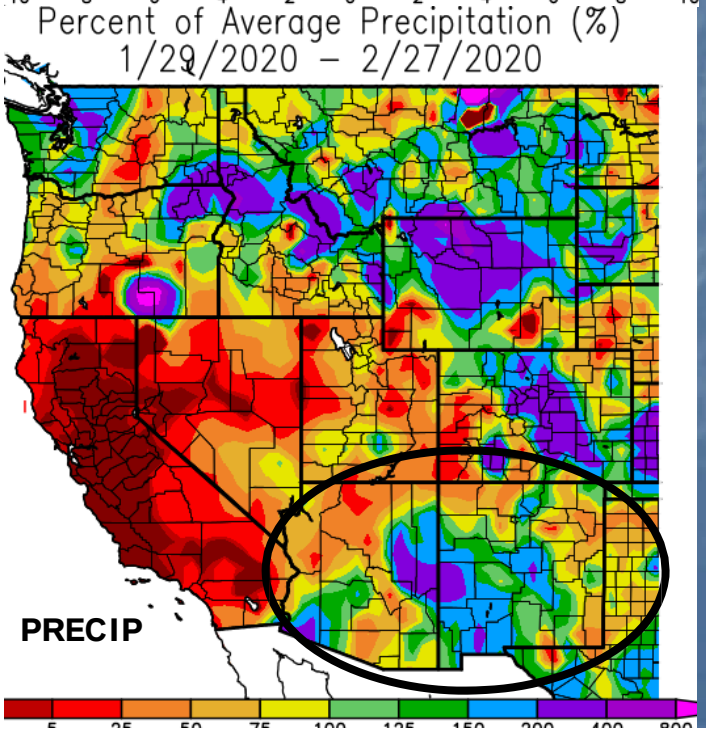
Fire Season 2020:

Late NOV 2019 thru Late FEB 2020

Temperature & Precipitation

- High temperatures have been close to Normal with wetter than normal conditions focused south & west, Drier than normal – eastern/southeastern plains





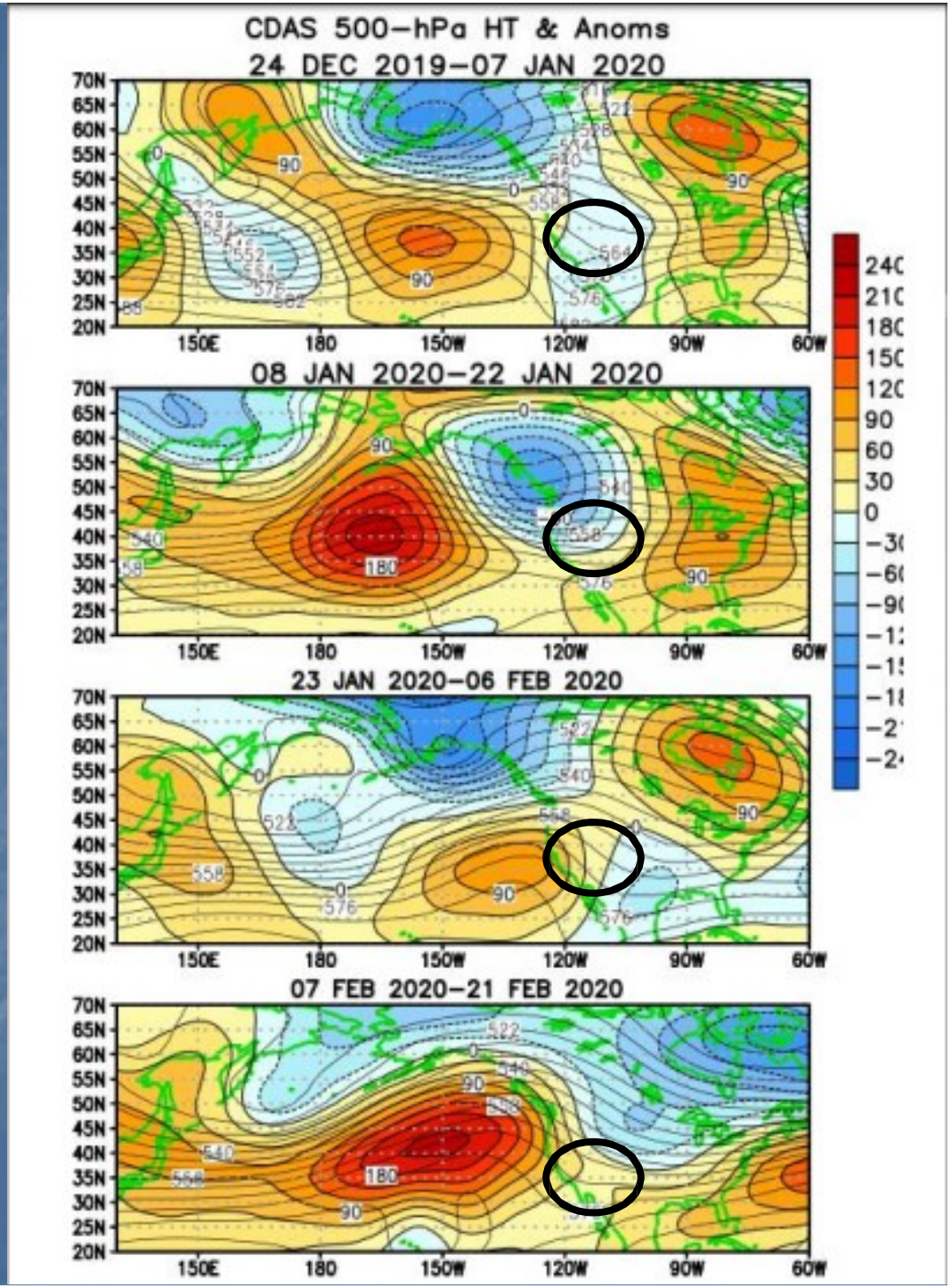
Fire Season 2020:
Past 30 Days
Temperature & Precipitation

- Overall cooler east, milder northwest, wetter along/near divide region, much of cntrl/srn NM, drier northwest and across far nrn NM

Atmospheric Anomalies over the North Pacific & North America – Last 60 Days

From late DEC ‘19 thru FEB ’20, Above Avg. heights and temperatures were evident over the eastern U.S.

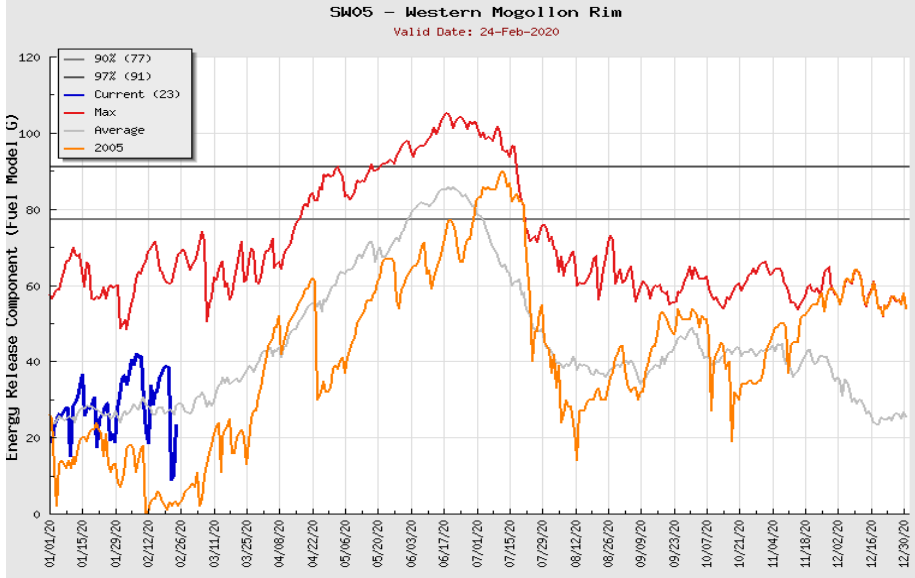
While more variable, heights over the western or central U.S. were predominantly below-avg, resulting in periods of near or below-avg. temperatures

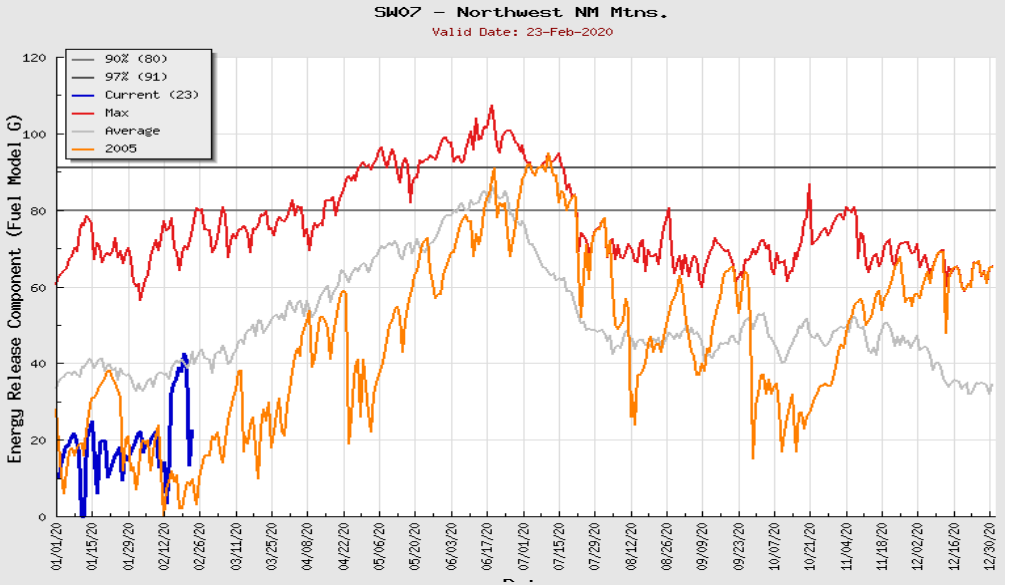


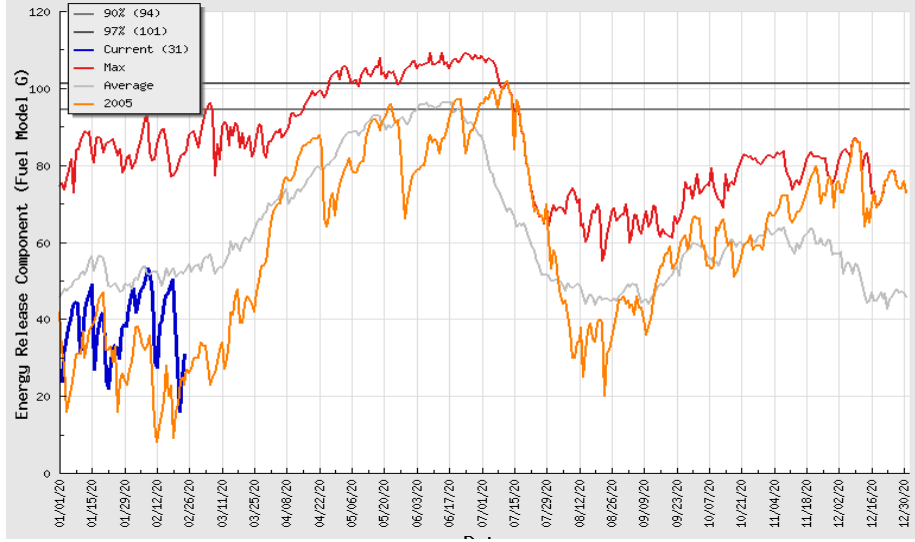
Fire Season 2020:

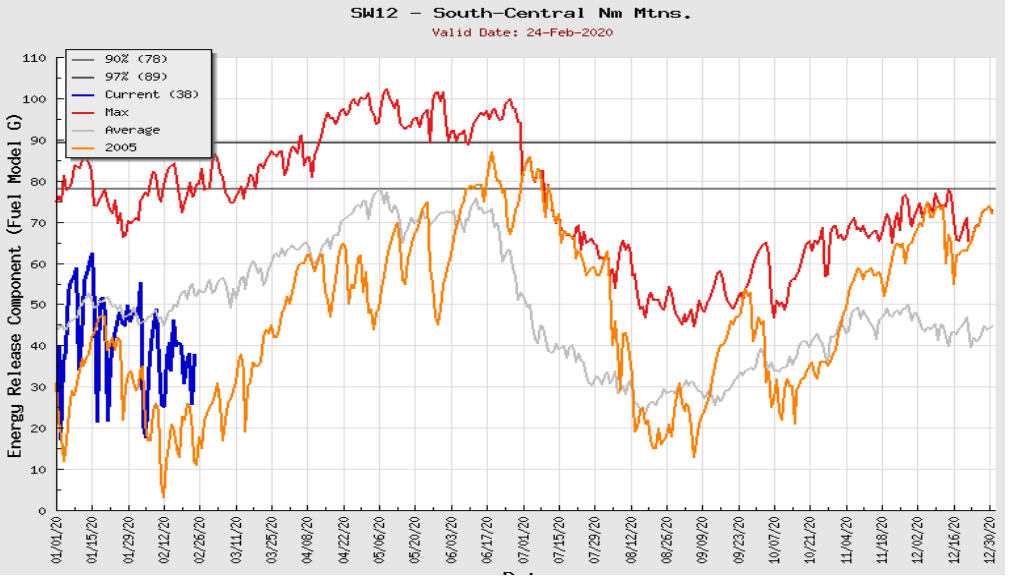
ERC Values

- ERC values below to slightly below average area-wide at present









ARIZONA SNOTEL Snow Water Equivalent Update Graph

As of TUESDAY: FEBRUARY 25 , 2020

Basin	Snow Water Equivalent Percent of Median
VERDE RIVER BASIN	64%
SAN FRANCISCO PEAKS	126%
CENTRAL MOGOLLON RIM	51%
LITTLE COLORADO - SOUTHERN HEADWATERS	74%
UPPER SALT RIVER BASIN / WHITE MOUNTAINS	67%
SAN FRANCISCO / UPPER GILA RIVER BASIN	71%
CHUSKA MOUNTAINS	*

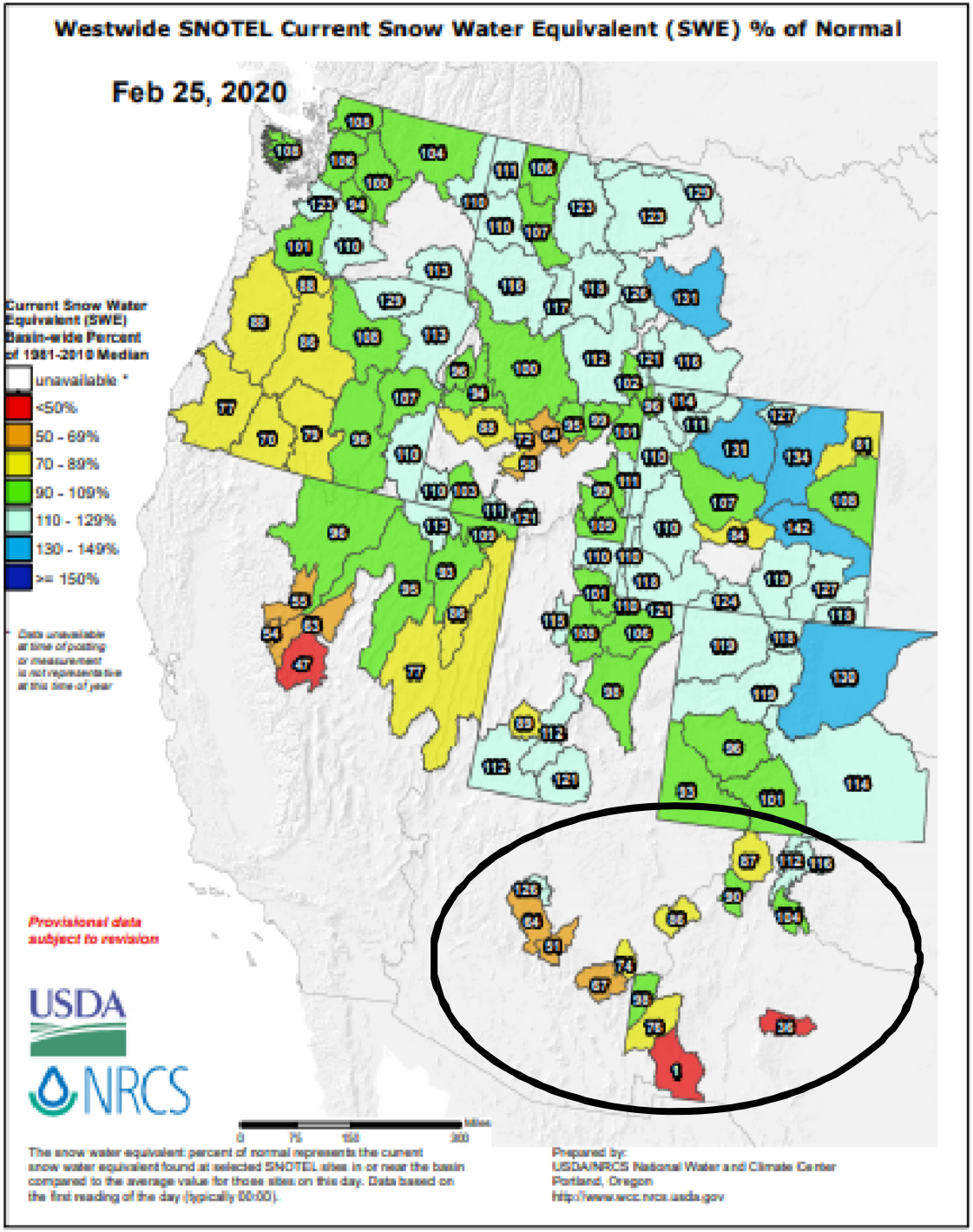
Legend:	<70%	70-90%	91-110%	111-130%	>130%

NEW MEXICO SNOTEL Snow Water Equivalent Update Graph

As of TUESDAY: FEBRUARY 25 , 2020

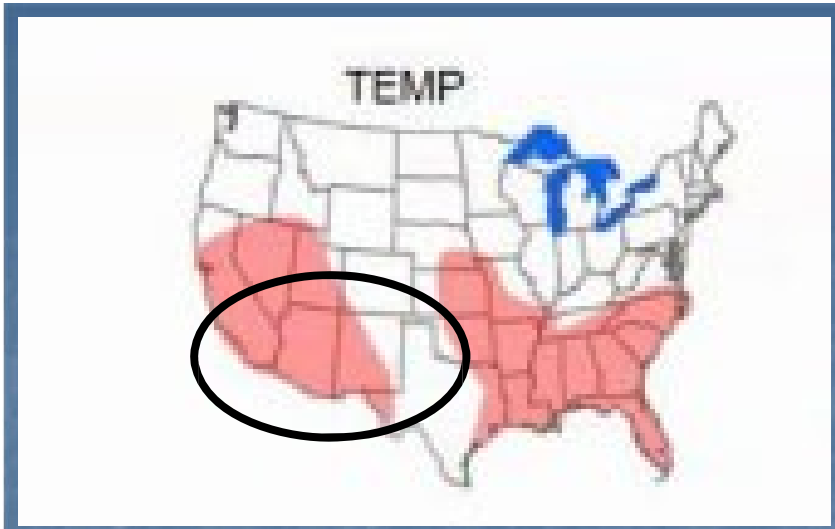
Basin	Snow Water Equivalent Percent of Median
RIO CHAMA RIVER BASIN	87%
UPPER RIO GRANDE BASIN	92%
SANGRE DE CRISTO MOUNTAIN RANGE BASINS	112%
JEMEZ RIVER BASIN	90%
SAN FRANCISCO RIVER BASIN	98%
GILA RIVER BASIN	76%
MIMBRES RIVER BASIN	1%
PECOS RIVER BASIN	104%
SAN JUAN RIVER HEADWATERS	92%
ANIMAS RIVER BASIN	97%
CIMARRON RIVER BASIN	116%
ZUNI/BLUEWATER RIVER BASIN	86%
RIO HONDO BASIN	36%
CHUSKA MOUNTAINS	*

Legend:	<70%	70-90%	91-110%	111-130%	>130%

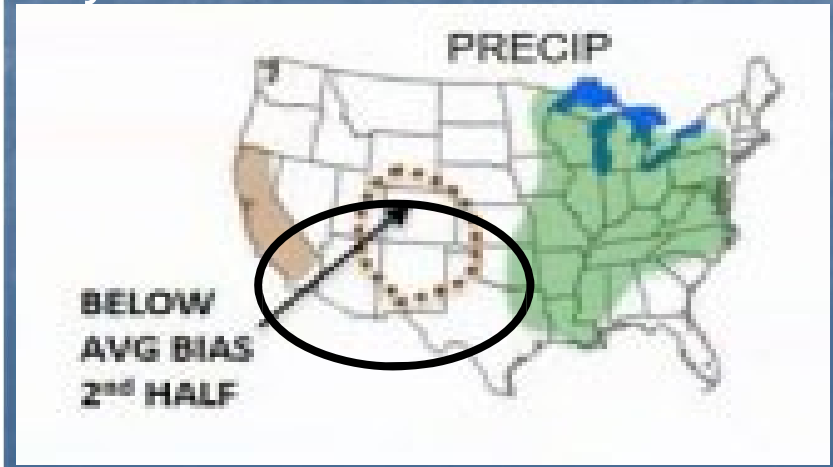


Fire Season 2020: MAR-JUN

Temperature & Precipitation Anomalies



Generally Above Average warmth (cooler east) although expected periods of variability, and a higher moisture signal west of the divide this spring (esp. Mar/Apr), and notably drier east, esp. by May/June

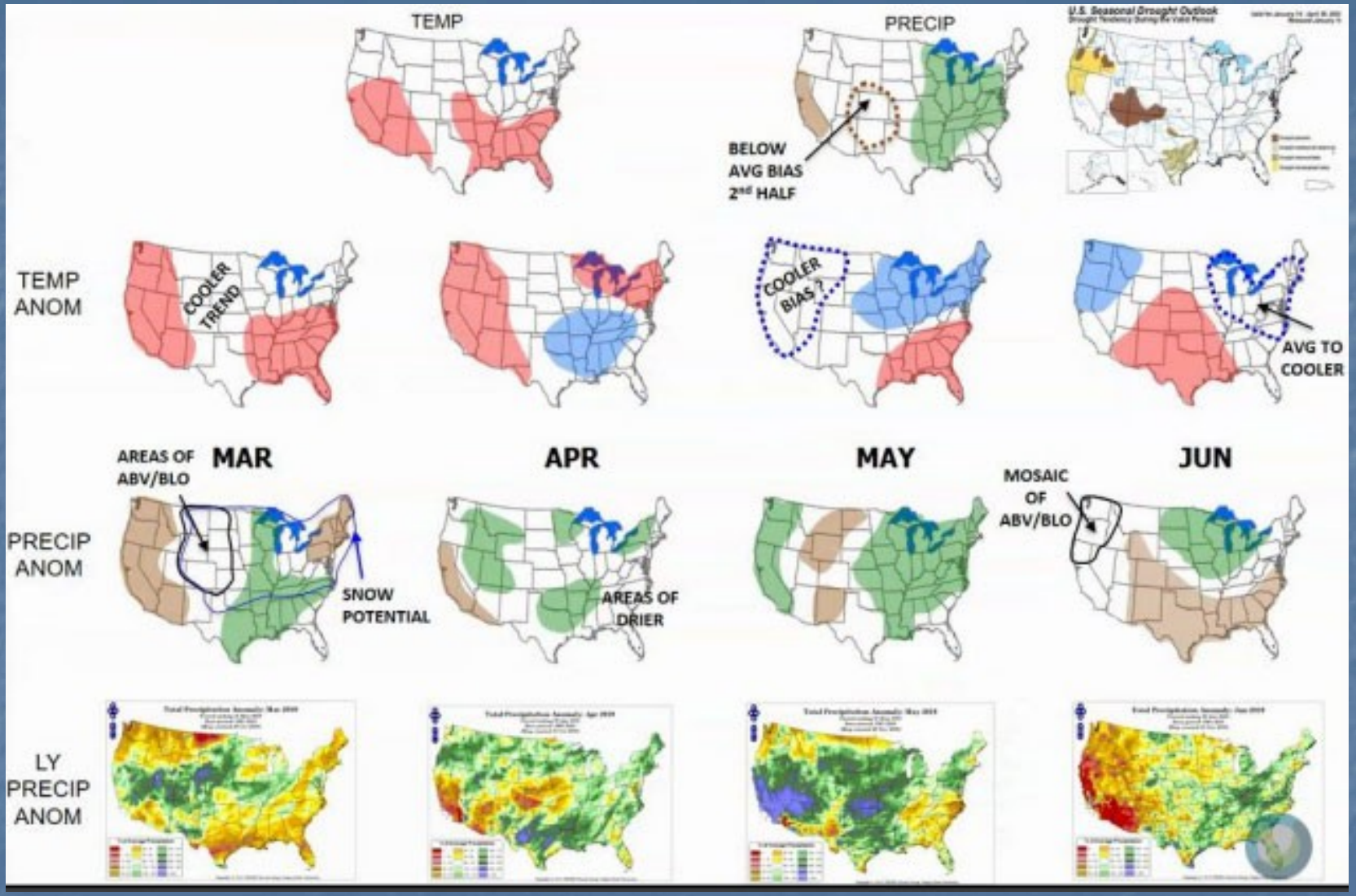


A variable pattern with some lengthy periods of mild temps being interrupted by cooler temperatures

Expect continued strong variability the next few months(esp. MAR/APR), with a drier pattern to emerge focused along/east of the NM central mountains by MAY/JUNE

Neutral ENSO pattern to linger into at least late spring/early summer - weak La Nina possible by fall

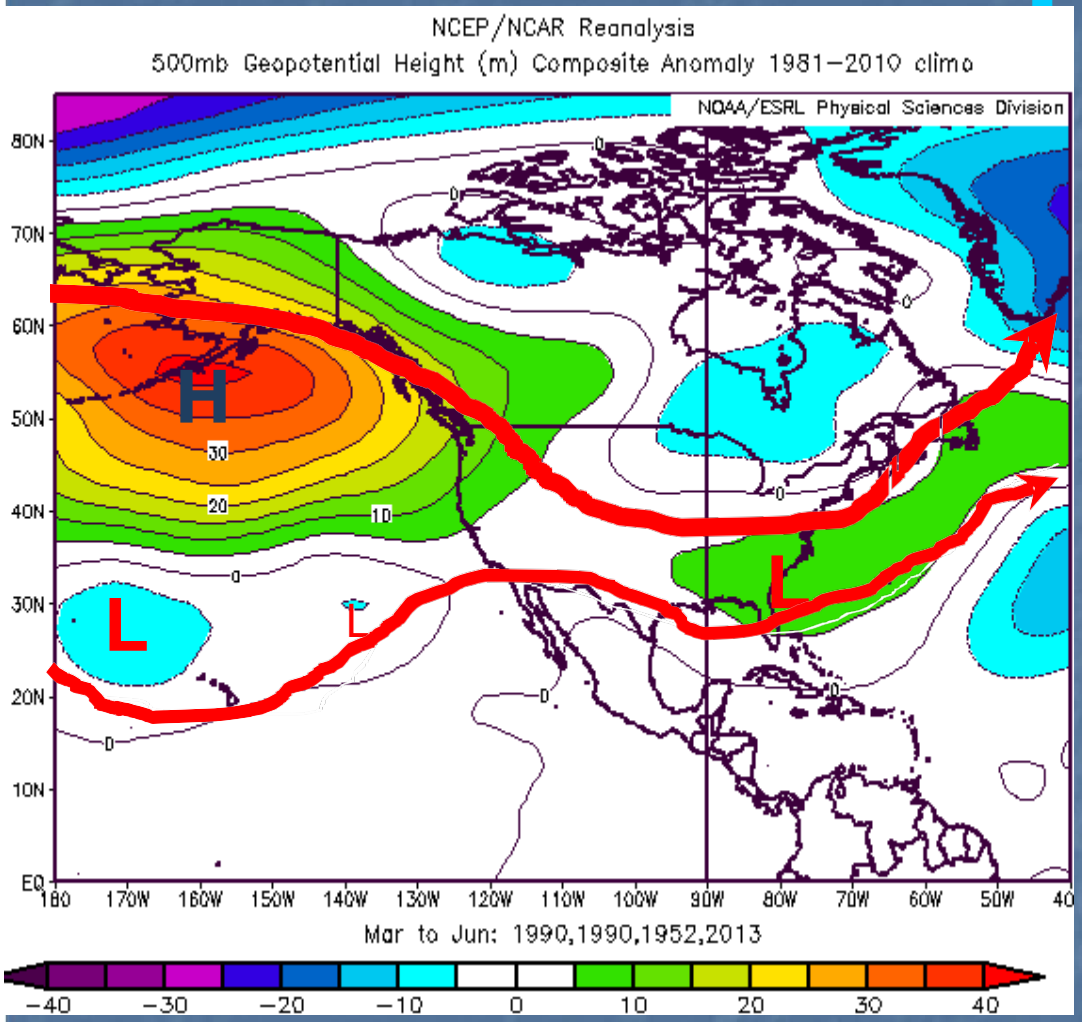
Latest Update – Month by Month through June



Mix of El Nino Modoki, Neutral, and otherwise variable ENSO SST anom. patterns to persist through spring with MJO/SOI variations having a great influence on T/P anoms

Fire Season 2020

Spring – early Summer Weather Pattern Impacts

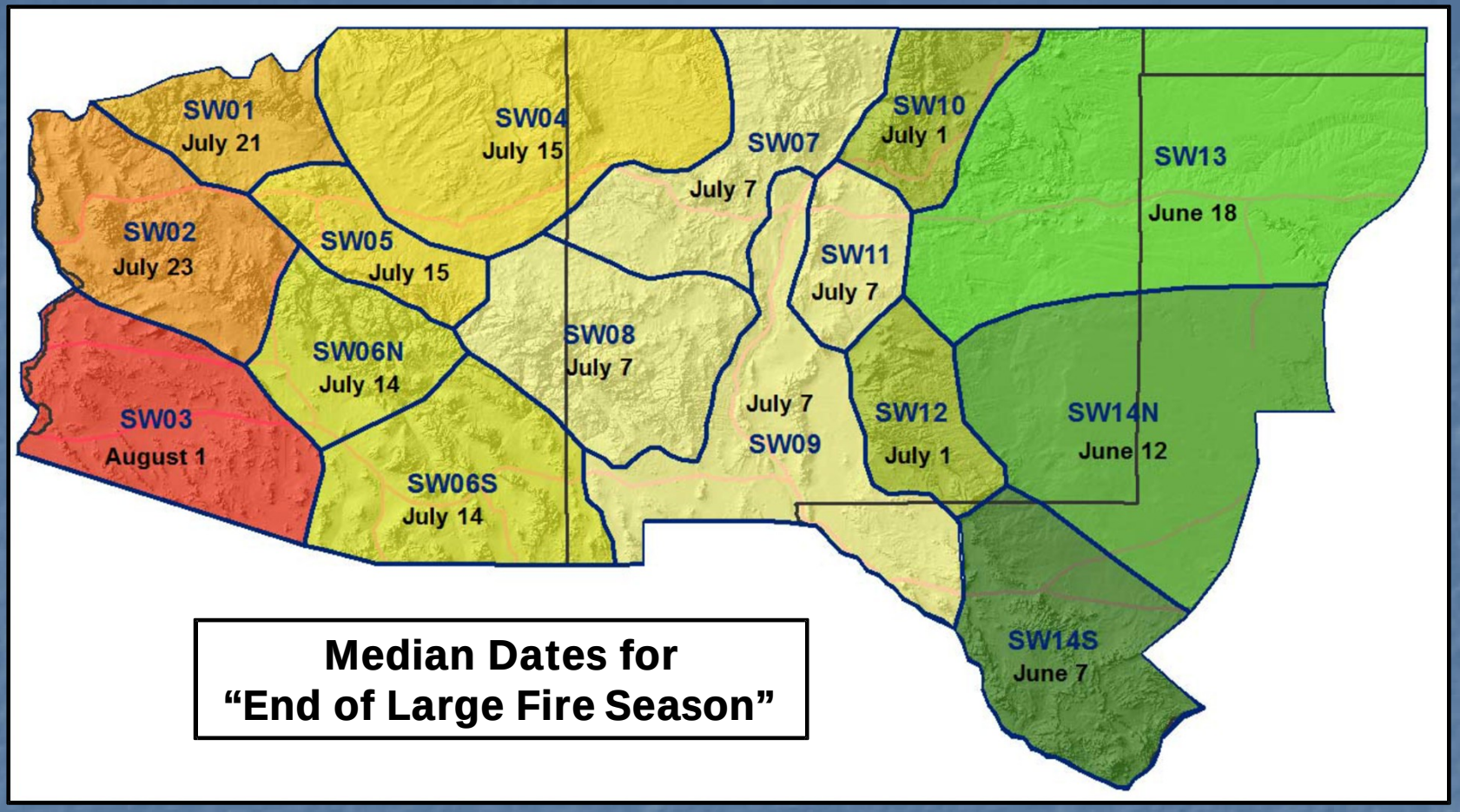


- A variable weather pattern overall with west-coast ridging interspersed with periods of western U.S. disturbances digging southward across/near the Great Basin/Southwest Area

- A periodically active subtropical jet and an active northern stream jet will provide periods of more moist weather to the region, esp. Mar/Apr...likely leading to periods of wetter than normal conditions (focused west)

- Early indications suggest a Normal-Above Normal & timely monsoon with areas of Above Average moisture

Fire Season 2020: Monsoon



- For Reference: Median dates for end of 'large fire' season.

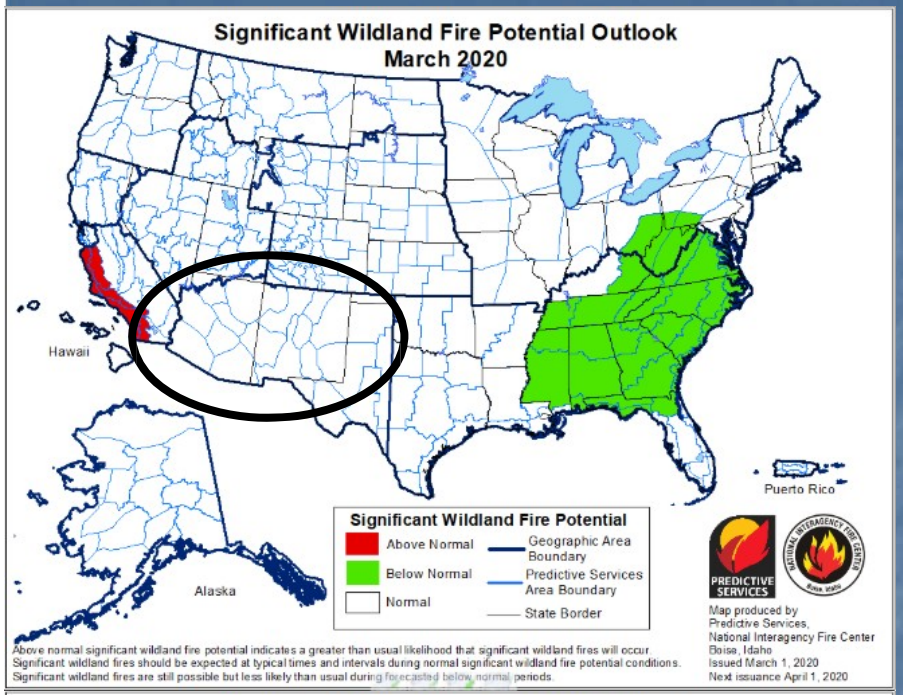
Potential for La Niña conditions to arrive by mid-late summer and continue into the fall…

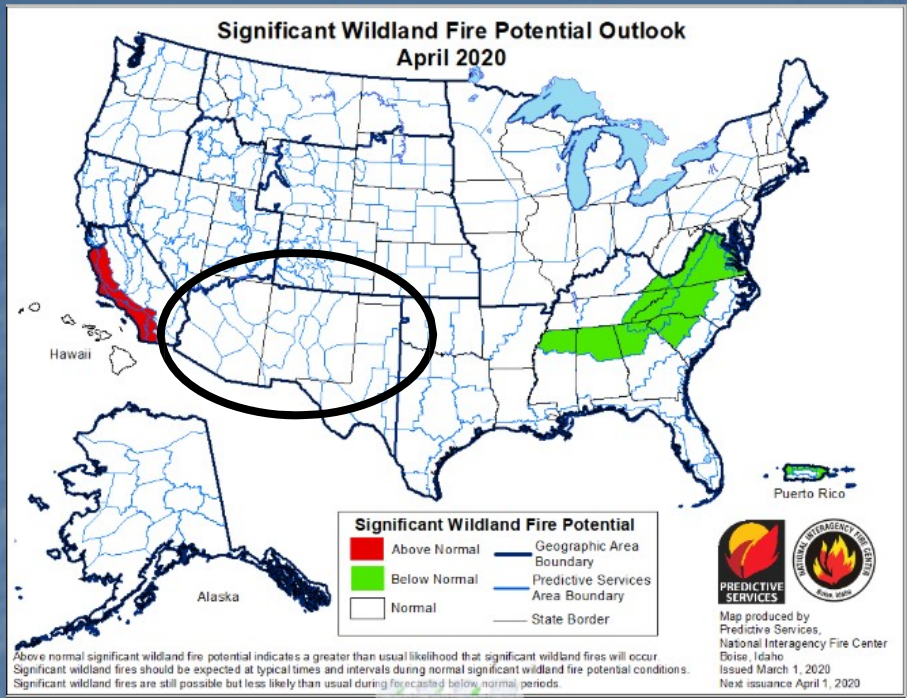
2020 Fire Season Factors Summary

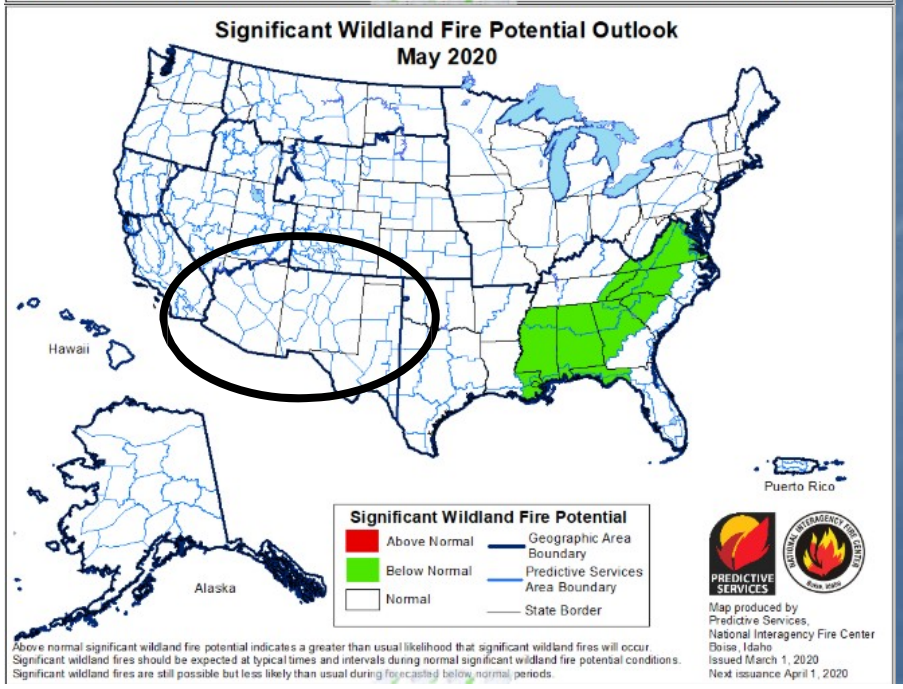
1. Drought – Severe drought northern AZ , 4 Corners into northern NM
2. Fine Fuels Condition – Normal to Below Normal loading and continuity, esp. across the northern half of AZ into western NM
3. Seasonal Temperature & Precipitation – Generally close to normal overall, slightly cooler overall west. More moist along/near the divide region and across some southern sections
4. Spring & early Summer Weather Pattern – A variable and active pattern into mid-late spring with a periodic active northern jet (though predominant west coast ridging) and an active subtropical jet at times. Expect increased moisture and widely fluctuating temperatures focused west of the divide with a tendency for drier conditions to take grip by MAY/JUNE, esp. along/east of the NM central mountains
5. Monsoon – Expect it to be timely, Normal to Above Normal.

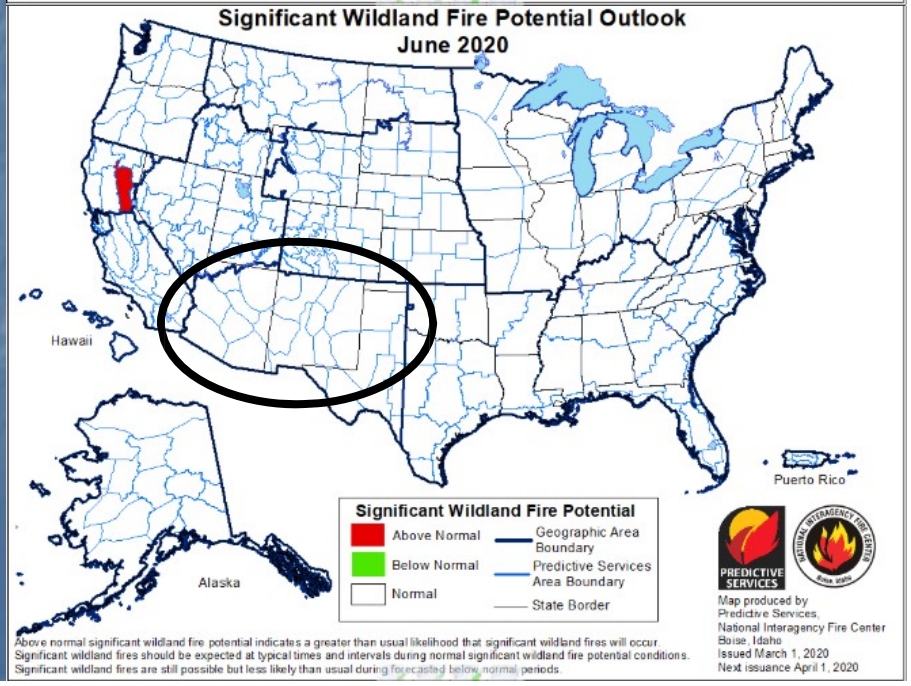
Bottom Line: An up & down pattern overall to likely keep the heavies out of the picture until late May/June with no real focus at present for this season

National Significant Wildland Fire Potential Outlook









END

SWCC Predictive Services

Next Update: Late MAR ‘20

Contact: SWCC Predictive Services
505-842-3473

Consult the Outlooks Page (Below) for Updated Information Through Fire Season:
http://gacc.nifc.gov/swcc/predictive/outlooks/outlooks.htm