



**EMPOWERING DECISION MAKERS 24/7**

**LONG RANGE WEATHER FORECAST**

**By Steve Mirsky – Senior Long-Range Meteorologist  
GENERAL FORECAST DISCUSSION**

**March 30, 2020**

One aspect of the COVID-19 pandemic has been a reduction in aircraft flights and thus of the aircraft-based observations available for model input. This may have the effect of degrading the quality of model guidance and hence, the forecasts.

We remain in a cold West vs. warm East alignment, with little chance of significant energy demands outside of the Intermountain Region (heating) and the immediate Gulf Coast/Florida (cooling demand). Severe weather threats will average about one every five days, mostly targeting the middle/lower Great Plains into the Midwest.

The subtropical jet stream remains in command of the national forecast, preventing any takeover of colder air and insuring chances for heavy precipitation events through much of the lower 48 states.

There will be a modest severe weather threat from N TX and S OK through parts of Dixie today and tomorrow. But cooler air behind this feature is quite limited. Most of the colder values will be in portions of the Pacific Northwest and Intermountain Region.

With the heat ridge starting to rebuild over the Gulf of Mexico and Florida next week, the next storm and subtropical jet stream input will be forced together, with a possible severe weather outbreak from the lower/middle Great Plains through the lower Midwest around April 7 - 8. Another severe thunderstorm situation looms for mid-month.

## **CHICAGO ILLINOIS AREA**

A storm will pass to the south of the region Tuesday missing our area, providing a respite from the stormy weather. Thus, dry weather is expected until a cold front crosses the region with a period of light rain mainly Friday night into Saturday morning. High pressure follows with dry conditions for the rest of the weekend. Some showers are possible early next week. As a storm system moves into the region from the west, rain chances will be increasing with potential thunderstorms as we go into the middle of next week. Another system can follow for the weekend of April 11-12<sup>th</sup>. Generally, active weather is likely through much of the month of April.

After starting the week cool, temperatures will be climbing to above normal late this week, before cooling to near normal this weekend. Then warmer again in advance of the next system. With systems quickly moving across the nation, it is hard to imagine any prolonged periods of excessively cold or warm weather for the next several weeks, if not much of the month of April. Periodic clouds and rain will help keep the temperatures down. Hence, temperatures for the month should average near/slightly below normal.

## **ROCHELLE ILLINOIS AREA**

A storm will pass to the south of the region Tuesday missing our area, providing a respite from the stormy weather. Thus, dry weather is expected until a cold front crosses the region with a period of light rain mainly Friday night into Saturday morning. High pressure follows with dry conditions for the rest of the weekend. Some showers are possible early next week. As a storm system moves into the region from the west, rain chances will be increasing with potential thunderstorms as we go into the middle of next week. Another system can follow for the weekend of April 11-12<sup>th</sup>. Generally, active weather is likely through much of the month of April.

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## **MILWAUKEE/MADISON/KENOSHA WISCONSIN AREA**

A storm will pass to the south of the region Tuesday missing our area, providing a respite from the stormy weather. Thus, dry weather is expected until a cold front crosses the region with a period of light rain mainly Friday night into Saturday morning. High pressure follows with dry conditions for the rest of the weekend. Some showers are possible early next week. As a storm system moves into the region from the west, rain chances will be increasing with potential thunderstorms as we go into the middle of next week. Another system can follow for the weekend of April 11-12<sup>th</sup>. Generally, active weather is likely through the month of April.

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## **HOWELL, MICHIGAN AREA**

A storm will pass to the south of the region Tuesday missing our area, providing a respite from the stormy weather. Thus, dry weather is expected until a cold front crosses the region with a period of light rain over the weekend. High pressure follows with dry conditions for the rest of the weekend. Some showers are possible early next week. As a storm system moves into the region from the west, rain chances will be increasing with potential thunderstorms as we go into the middle of next week. Another system can follow for the weekend of April 11-12<sup>th</sup>. Generally, active weather is likely through the month of April.

After starting the week cool, temperatures will be climbing to above normal late this week, before cooling to near normal this weekend. Then warmer again in advance of the next system. With systems quickly moving across the nation, it is hard to imagine any prolonged periods of excessively cold or warm weather for the next several weeks, if not much of the month of April. Periodic clouds and rain will help keep the temperatures down. Hence, temperatures for the month should average near/slightly below normal.

## **CARMEL INDIANA AREA**

A storm will pass to the south of the region Tuesday likely barely missing our area, providing a respite from the stormy weather. Thus, dry weather is expected until a cold front crosses the region with a period of light rain over the weekend. High pressure follows with dry conditions for the rest of the weekend. Some showers are possible early next week. As a storm system moves into the region from the west, rain chances will be increasing with potential thunderstorms as we go into the middle of next week. Another system can follow for the weekend of April 11-12<sup>th</sup>. Generally, active weather is likely through the month of April.

After starting the week cool, temperatures will be climbing to above normal late this week, before cooling to near normal this weekend. Then warmer again in advance of the next system. With systems quickly moving across the nation, it is hard to imagine any prolonged periods of excessively cold or warm weather for the next several weeks, if not much of the month of April. Periodic clouds and rain will help keep the temperatures down. Hence, temperatures for the month should average near/slightly below normal.

## **CENTRAL/SOUTHERN ILLINOIS REGION**

Temperatures are expected to average close to normal in the 1-5 day period and near/slightly above normal in the subsequent 6-10, 11-15 and 16-20 periods.

After starting the week cool helped by clouds and rain over the far southern areas, temperatures will be climbing to above 10 degrees above normal late this week, before cooling to near normal late in the week/early in the weekend as a cold front crosses the region. Then warmer again in advance of the next system, which will be a storm system coming out of the west and passing to the north of the region, spreading clouds with showers and thunderstorms. With systems quickly moving across the nation, it is hard to imagine any prolonged periods of excessively cold or warm weather for the next several weeks, if not much of the month of April despite the reappearance of the western trough. Periodic clouds and rain will help keep the temperatures down. Hence, temperatures for the month should average near/slightly below normal.

Severe thunderstorms are possible early/middle next week.

## **MISSOURI REGION**

Temperatures are expected to average close to normal in the 1-5 day period and near/slightly above normal in the subsequent 6-10, 11-15 and 16-20 periods. Temperatures will be close to normal in the western markets for the latter period.

After starting the week cool helped by clouds and rain over the far southern areas, temperatures will be climbing to above 10 degrees above normal late this week, before cooling to near normal late in the week as a cold front crosses the region. Then warmer again in advance of the next system, which will be a storm system coming out of the west and passing to the north of the region, spreading clouds with showers and thunderstorms. With systems quickly moving across the nation, it is hard to imagine any prolonged periods of excessively cold or warm weather for the next several weeks, if not much of the month of April despite the reappearance of the western trough. Periodic clouds and rain will help keep the temperatures down. Hence, temperatures for the month should average near/slightly below normal.

Severe thunderstorms are possible early/middle next week.

## **SOUTH CENTRAL REGION**

Temperatures are expected to average close to normal in the 1-5 day period and near/slightly above normal in the subsequent 6-10, 11-15 and 16-20 periods. Temperatures will be close to normal in the western markets for the latter period.

After starting the week cool helped by clouds and rain, temperatures will be climbing to about 5-10 degrees above normal late this week, before cooling to near normal late this week in the west and this weekend in the east as a cold front crosses the region. Then warmer again in advance of the next system, which will be a storm system coming out of the west and passing to the north of the region, spreading clouds with showers and thunderstorms. With systems quickly moving across the nation, it is hard to imagine any prolonged periods of excessively cold or warm weather for the next several weeks, if not much of the month of April despite the reappearance of the western trough. Even so, eastern areas should be the most above normal due to a heat ridge in the Southeast part of the nation. Still, periodic clouds and rain will help keep the temperatures down. Hence, temperatures for the month should average near/slightly below normal.

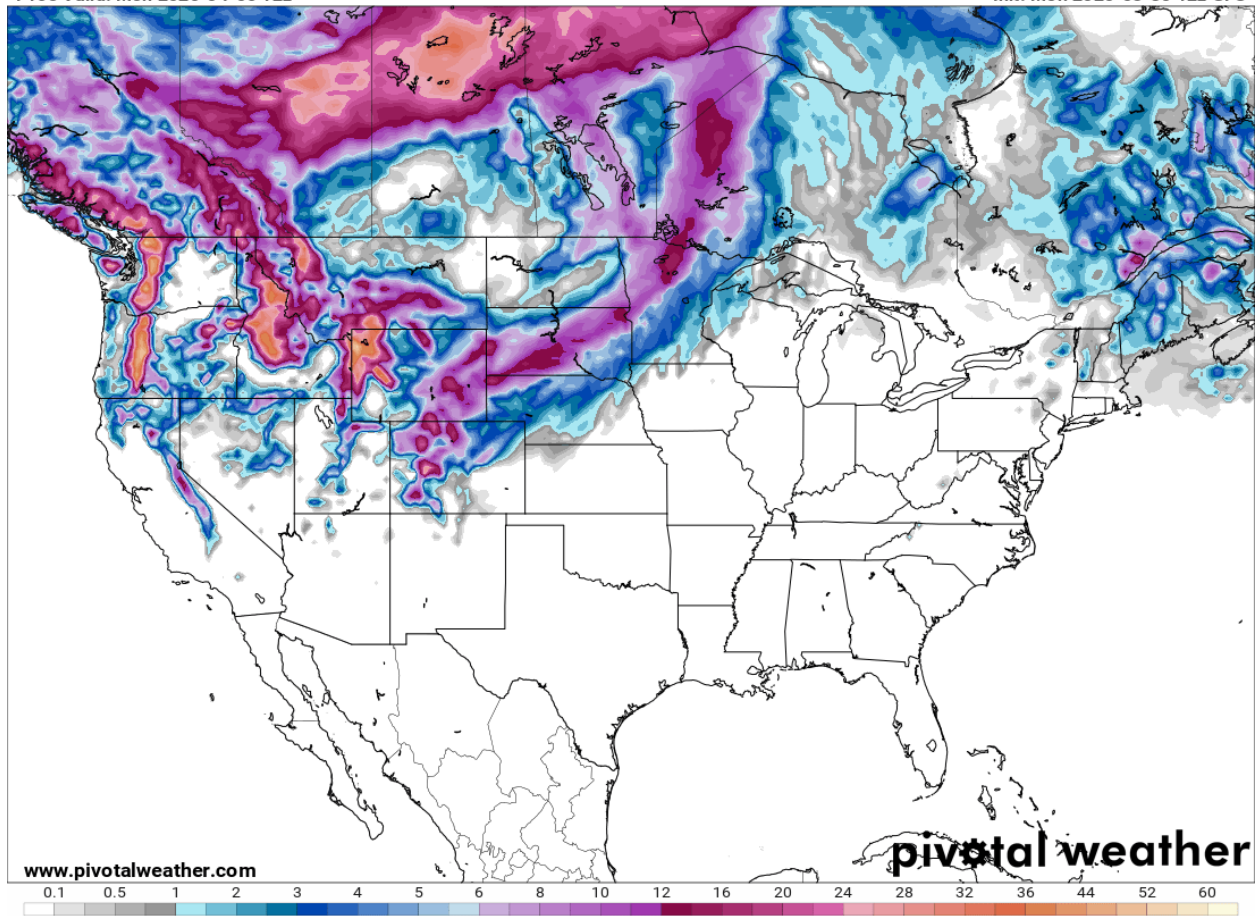
Severe thunderstorms are possible today and again early/middle next week.

## GFS 7 DAY SNOWFALL DEPICTION

Total Accumulated Snowfall, Kuchera Ratio (in)

F168 Valid: Mon 2020-04-06 12z

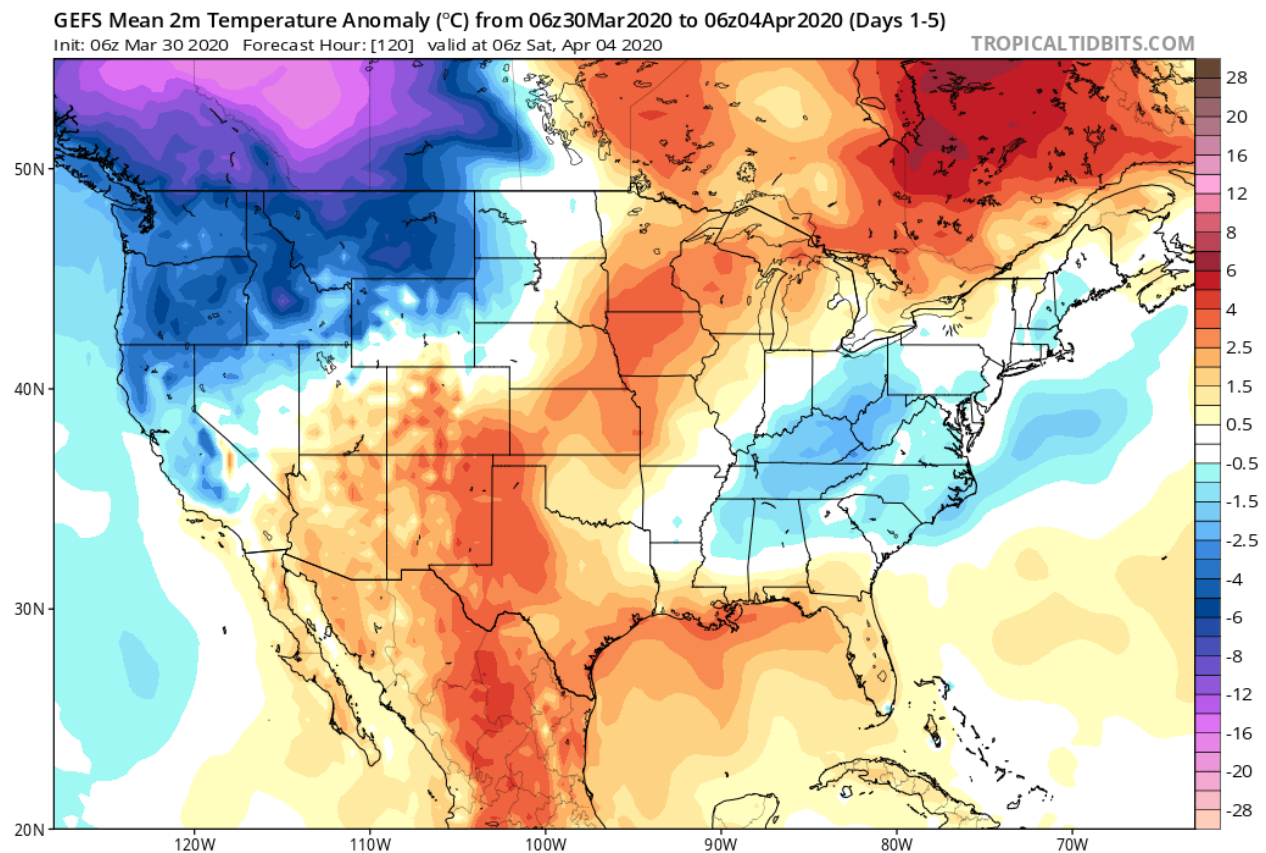
Init: Mon 2020-03-30 12z GFS



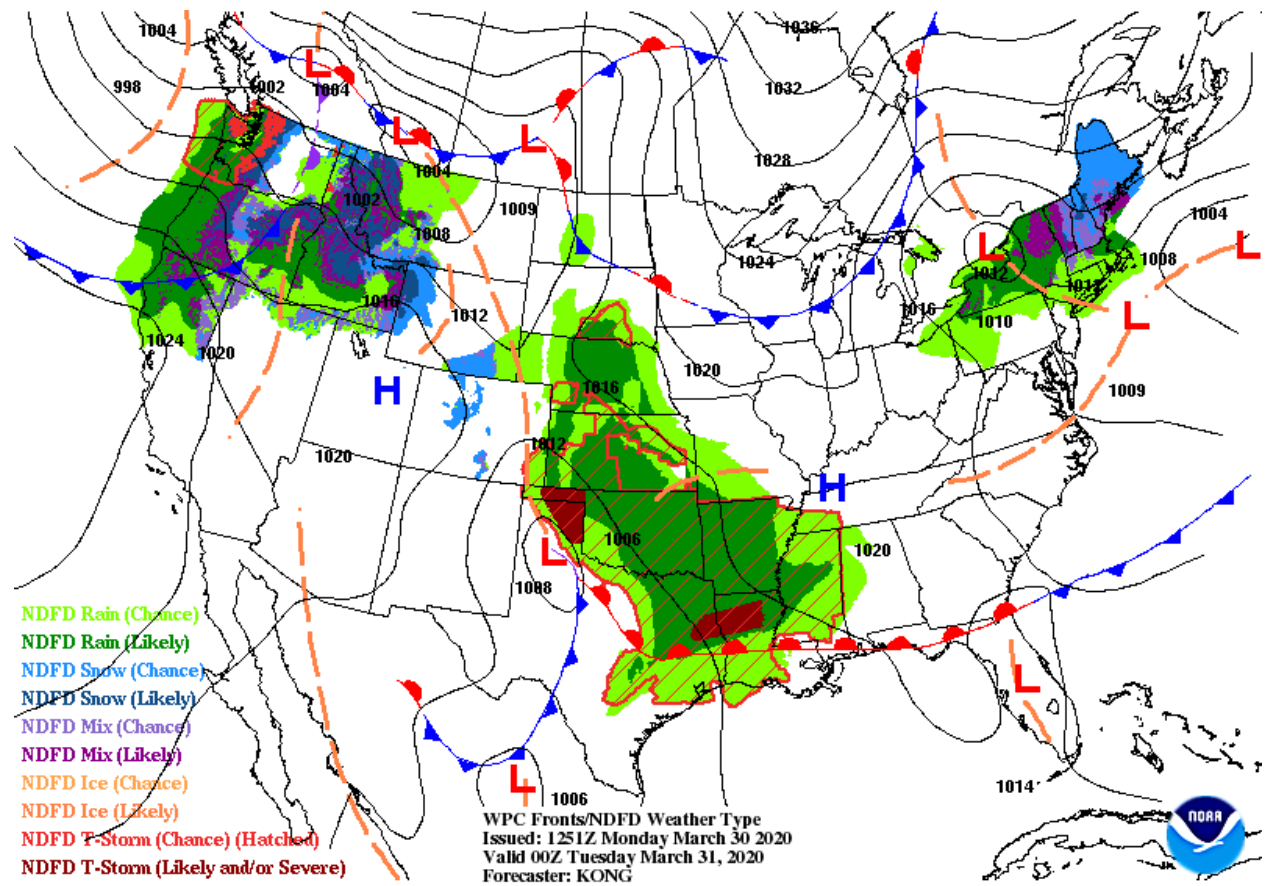
## 7 DAY PRECIPITATION DEPICTION

### Days 1-5 (March 30-April 3)

A storm moves from Texas through the South with some severe thunderstorms with rain north to the Mid-Atlantic. A cold front will move from the Northwest to the middle of the country at the end of the period. There will be snow from the Northern Rocky Mountains to the Northern High Plains and rain showers elsewhere with this front.

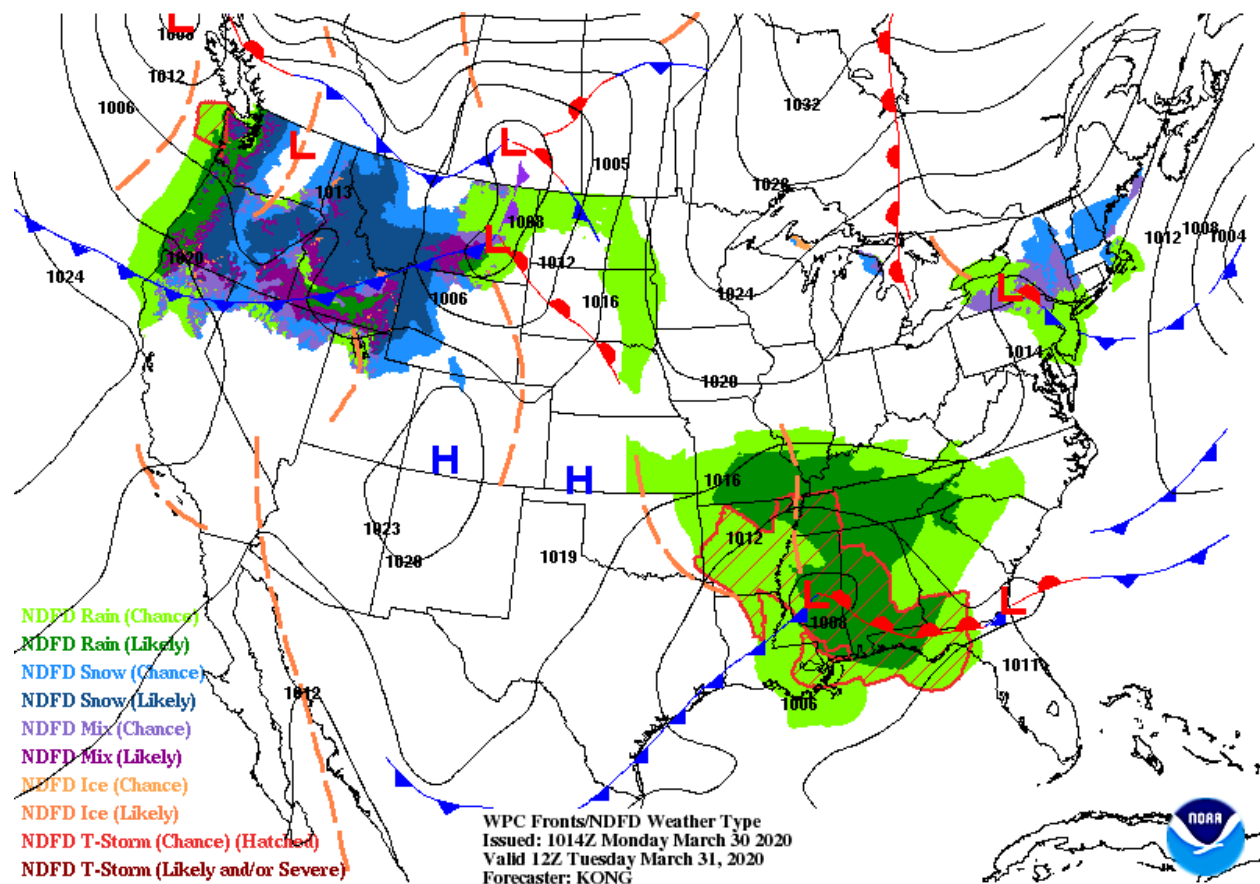


# TODAY

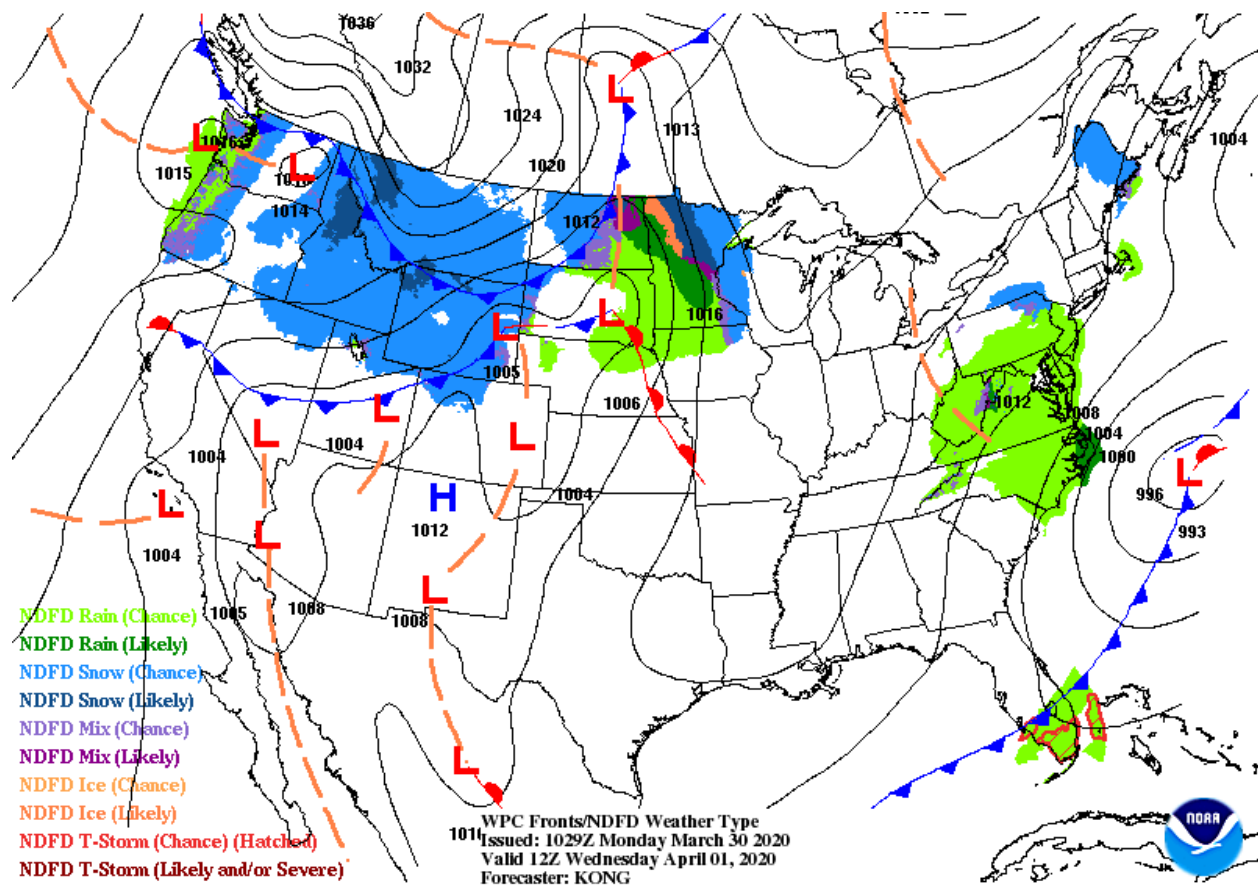




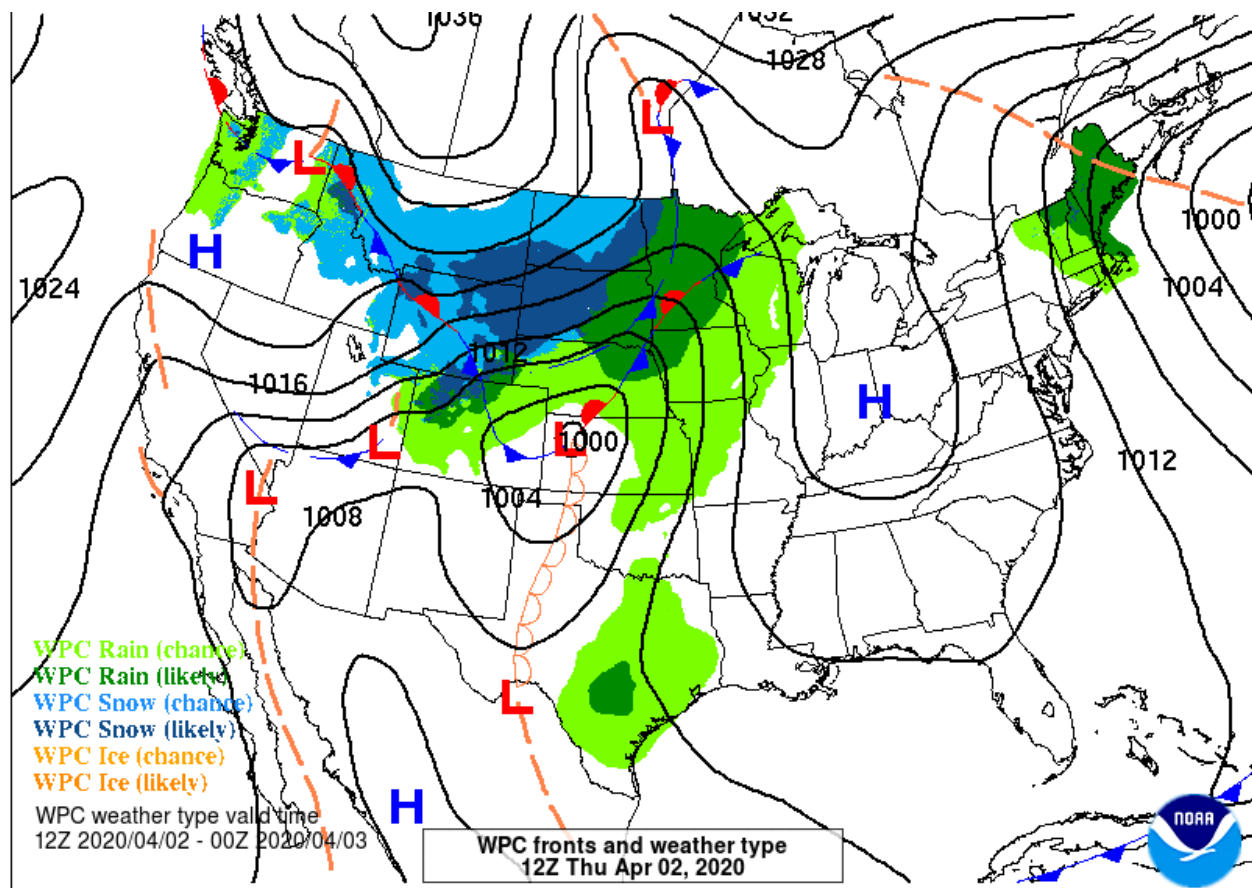
**TUESDAY 7AM CDT**



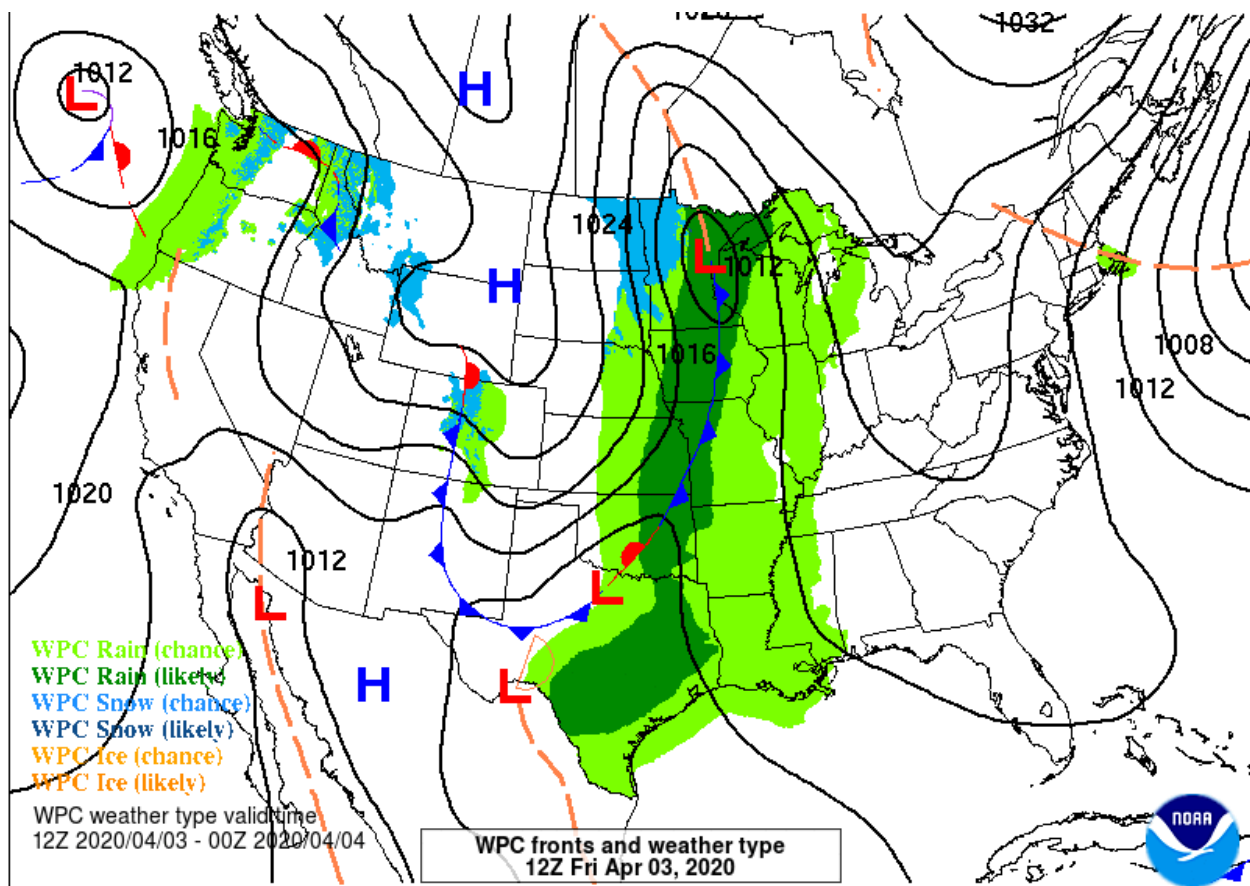
**WEDNESDAY 7AM CDT**



THURSDAY 7AM CDT

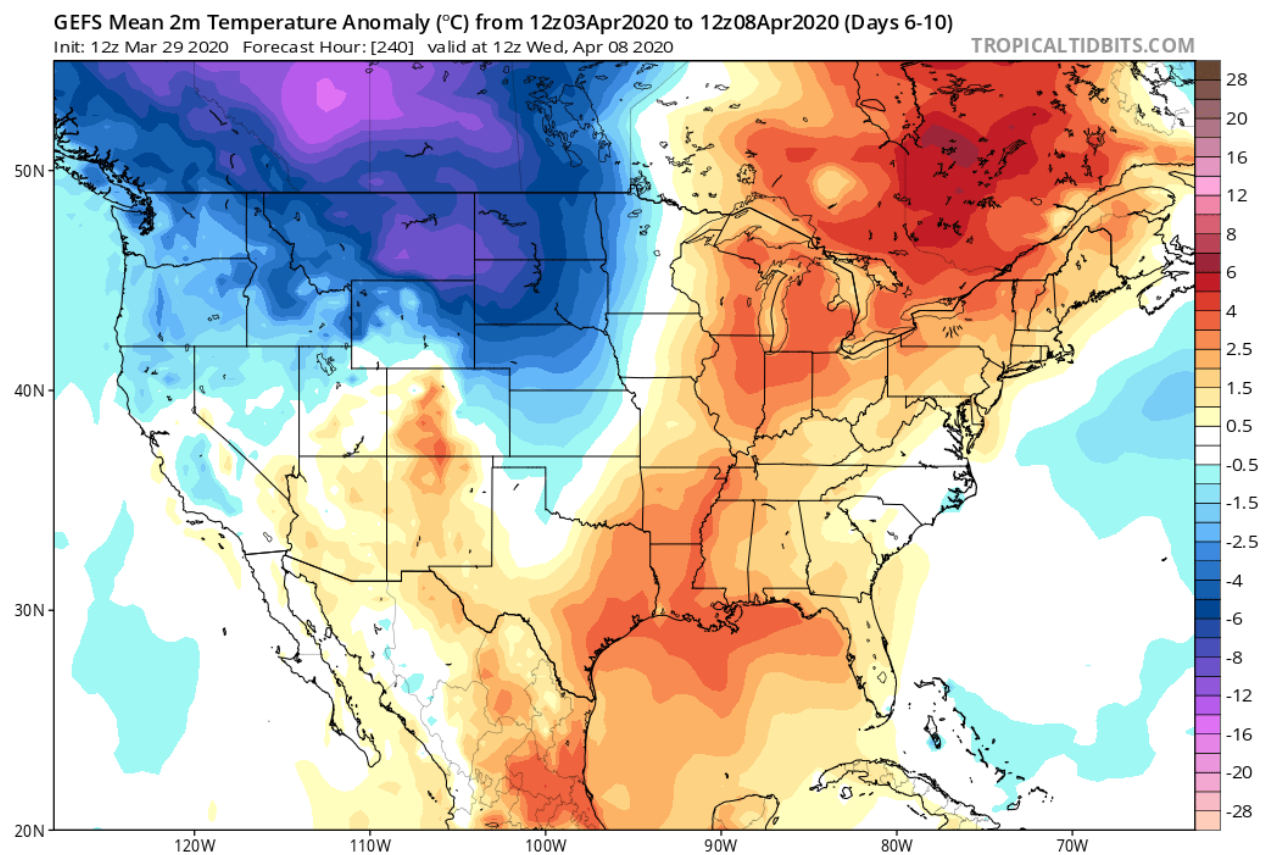


FRIDAY 7AM CDT



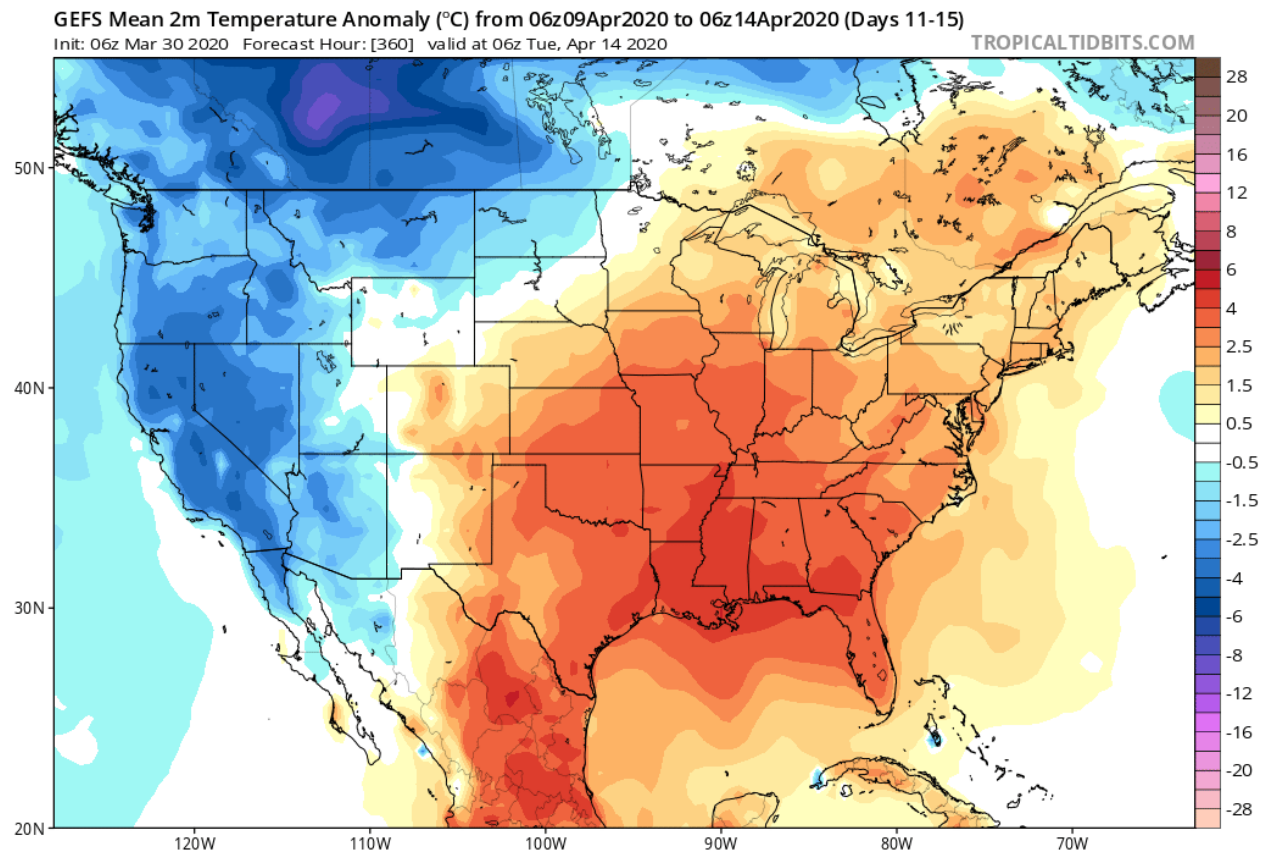
## Days 6-10 (April 4-8)

The cold front will have trouble with producing impacts in the East, although showers and thunderstorms will likely limit the warmth. Cold will probably return to the West during this period, behind a storm that moves onto the Central Plains at the end of the period. This storm may bring severe thunderstorms to the South-Central States.



## Days 11-15 (April 8-12)

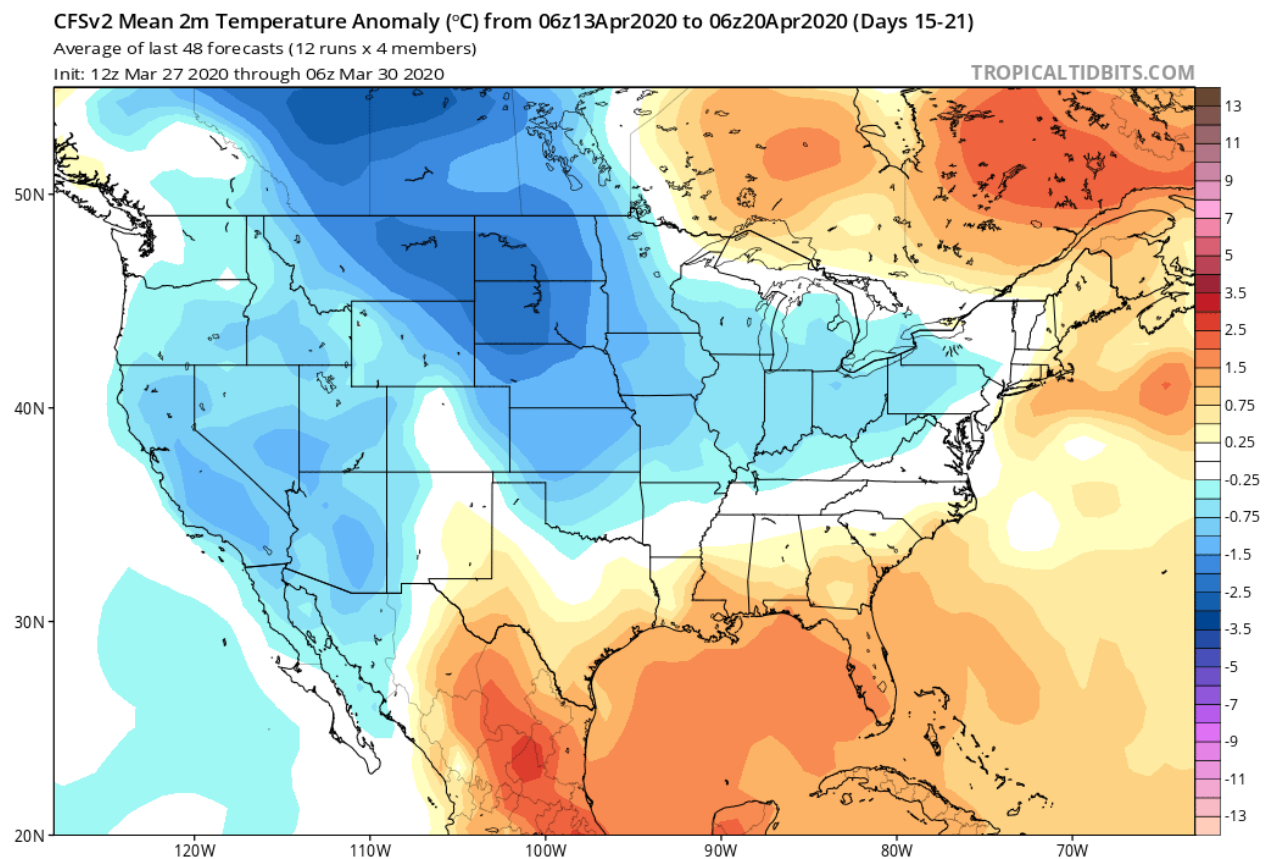
The heat ridge rebuilds in this period, covering Florida and Georgia and setting up a run of cooling demand in those states. But the basic cool West vs. warm East alignment is locked into place, dented only by a storm ejecting from the Intermountain Region. That would mean likely outbursts of severe weather from the south central U.S. into the Ohio Valley.



## Week 3 and 4

Not much of a change in the prevailing cool West vs. warm East pattern through the month of April and the model below may be overdone with the cool temperatures over parts of the East. The trough may advance through the Intermountain Region, which in turn may permit ejecting waves to target the Great Plains and Midwest with repeated cases of heavy rain and strong thunderstorms.

## CFS MODEL WEEK 3





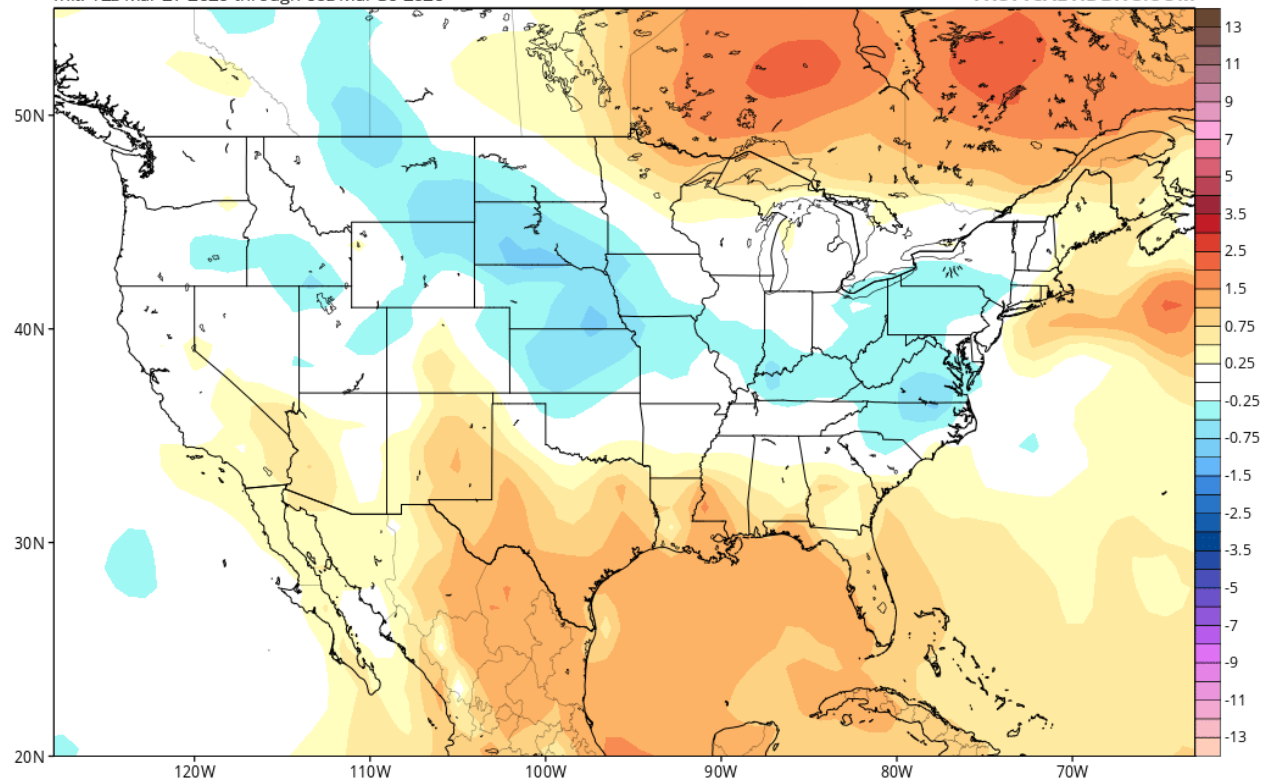
## CFS MODEL WEEK 4

CFSv2 Mean 2m Temperature Anomaly (°C) from 06z20Apr2020 to 06z27Apr2020 (Days 22-28)

Average of last 48 forecasts (12 runs x 4 members)

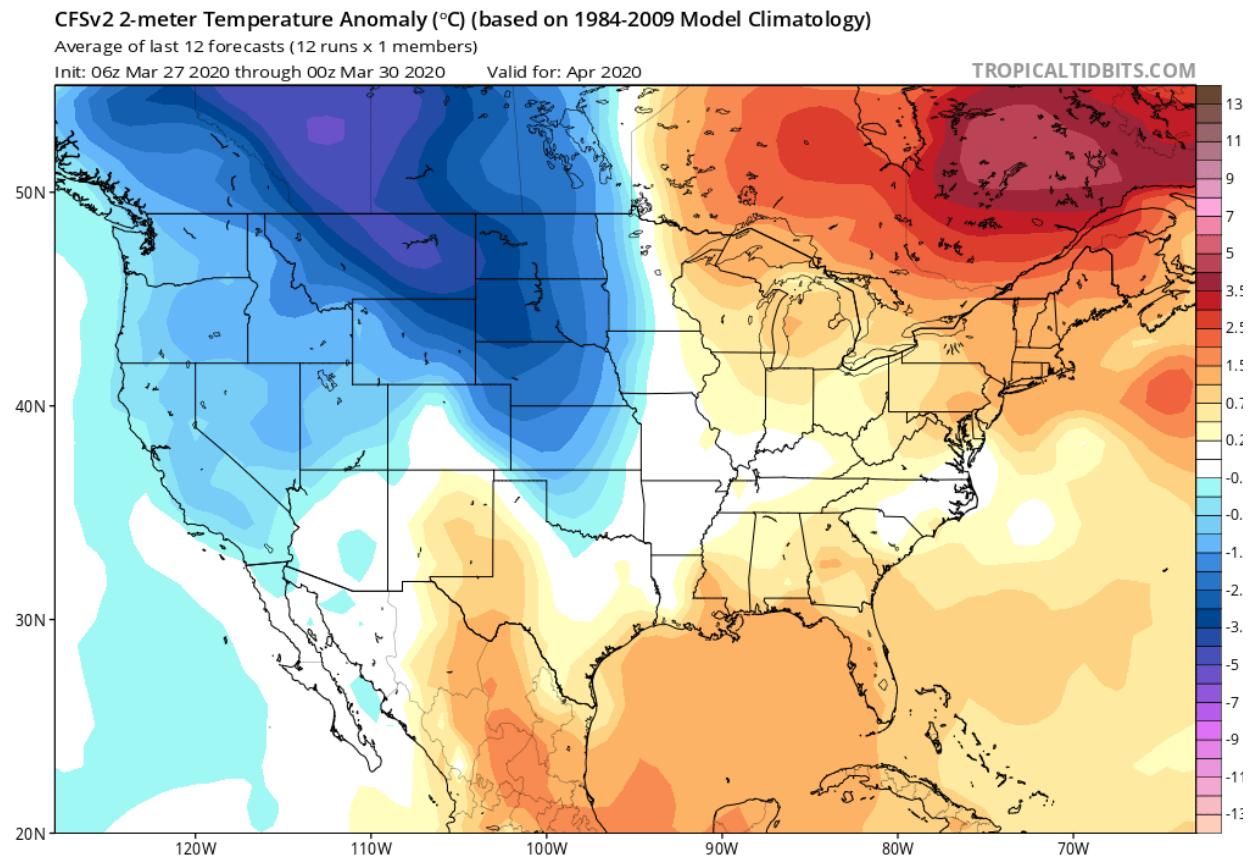
Init: 12z Mar 27 2020 through 06z Mar 30 2020

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## CFS MODEL APRIL TEMPERATURE FORECAST



## CFS MODEL MAY TEMPERATURE FORECAST

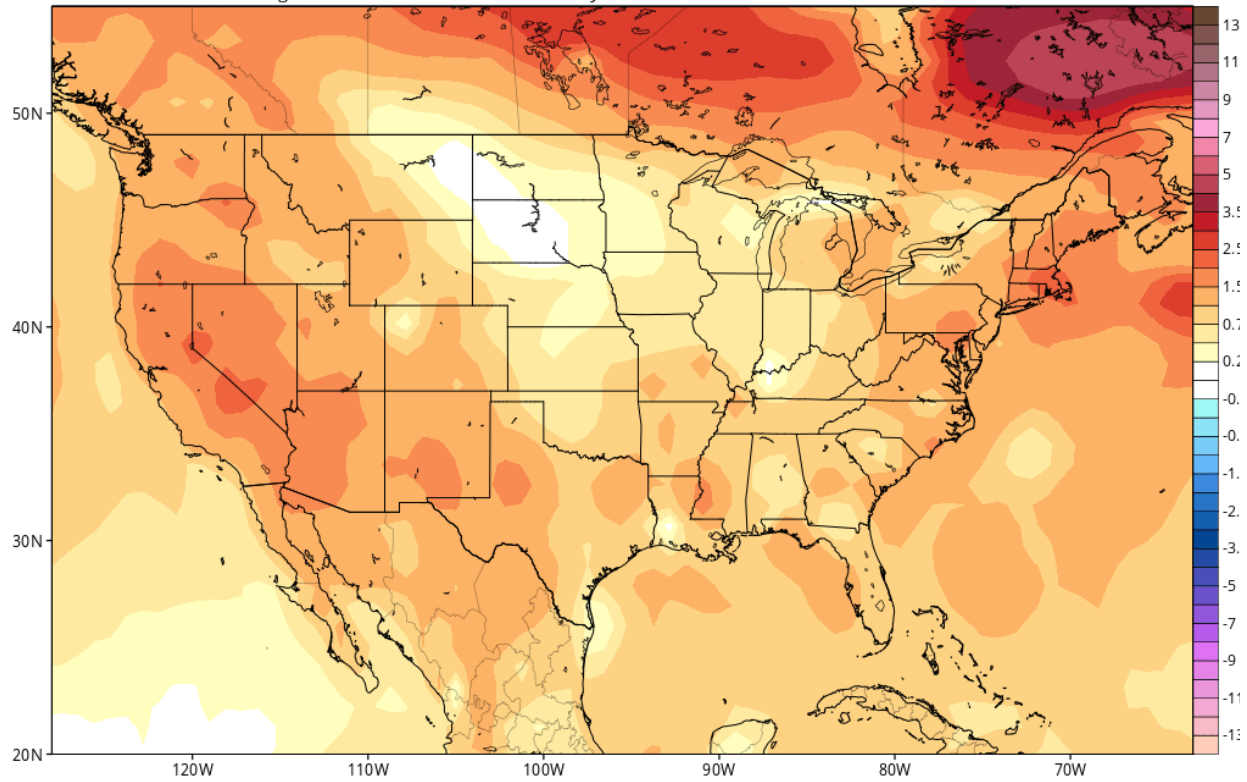
**CFSv2 2-meter Temperature Anomaly (°C) (based on 1984-2009 Model Climatology)**

Average of last 12 forecasts (12 runs x 1 members)

Init: 06z Mar 27 2020 through 00z Mar 30 2020

Valid for: May 2020

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**CFS MODEL JUNE FORECAST**

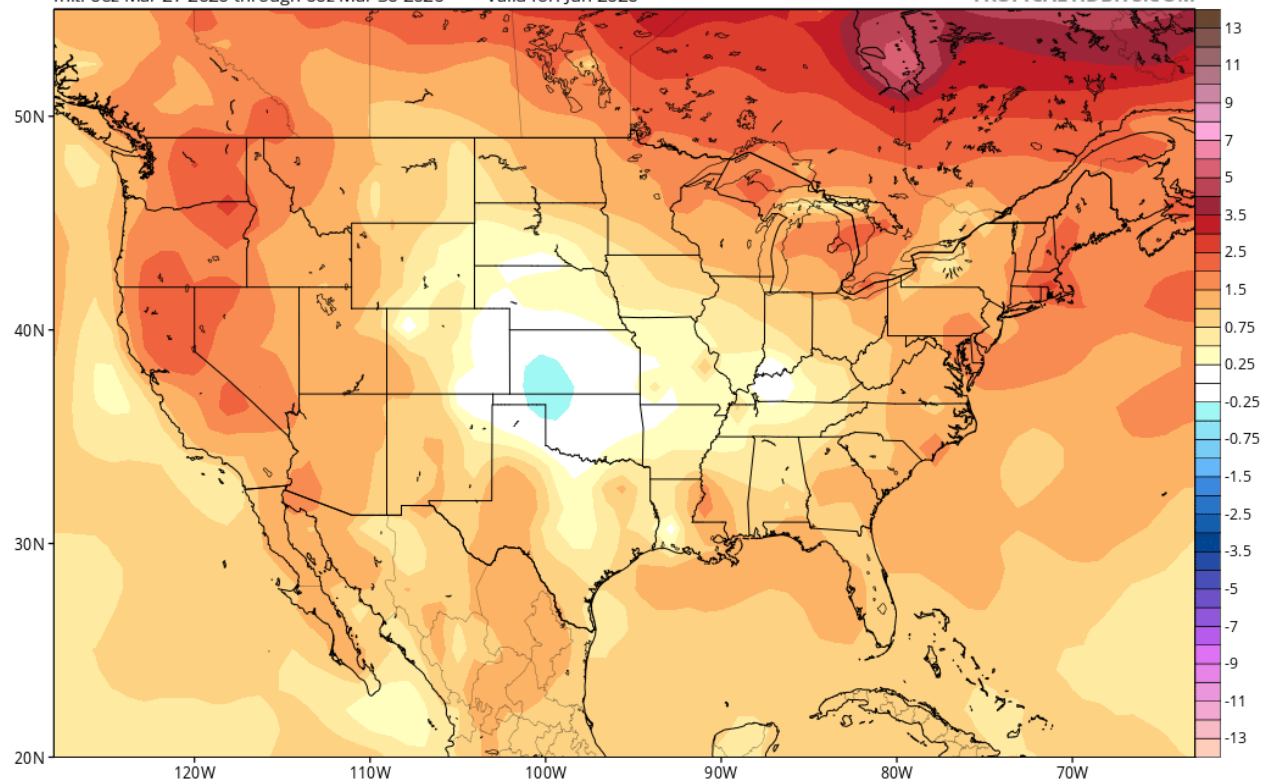
**CFSv2 2-meter Temperature Anomaly (°C) (based on 1984-2009 Model Climatology)**

Average of last 12 forecasts (12 runs x 1 members)

Init: 06z Mar 27 2020 through 00z Mar 30 2020

Valid for: Jun 2020

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EUROPEAN MODEL APRIL-JUNE

ECMWF Seasonal Forecast

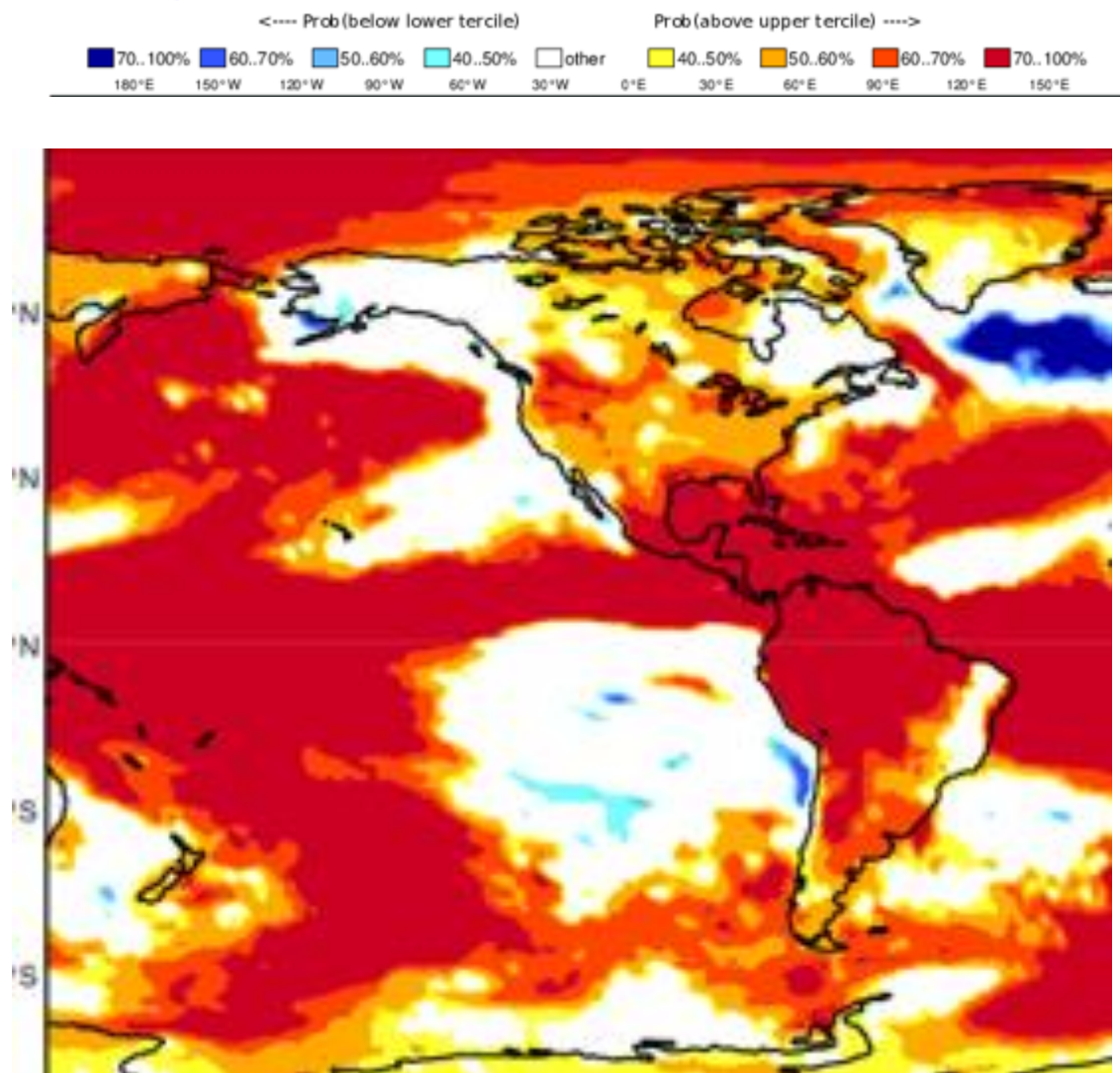
Prob(most likely category of 2m temperature)

Forecast start is 01/03/20, climate period is 1993-2016

Ensemble size = 51, climate size = 600

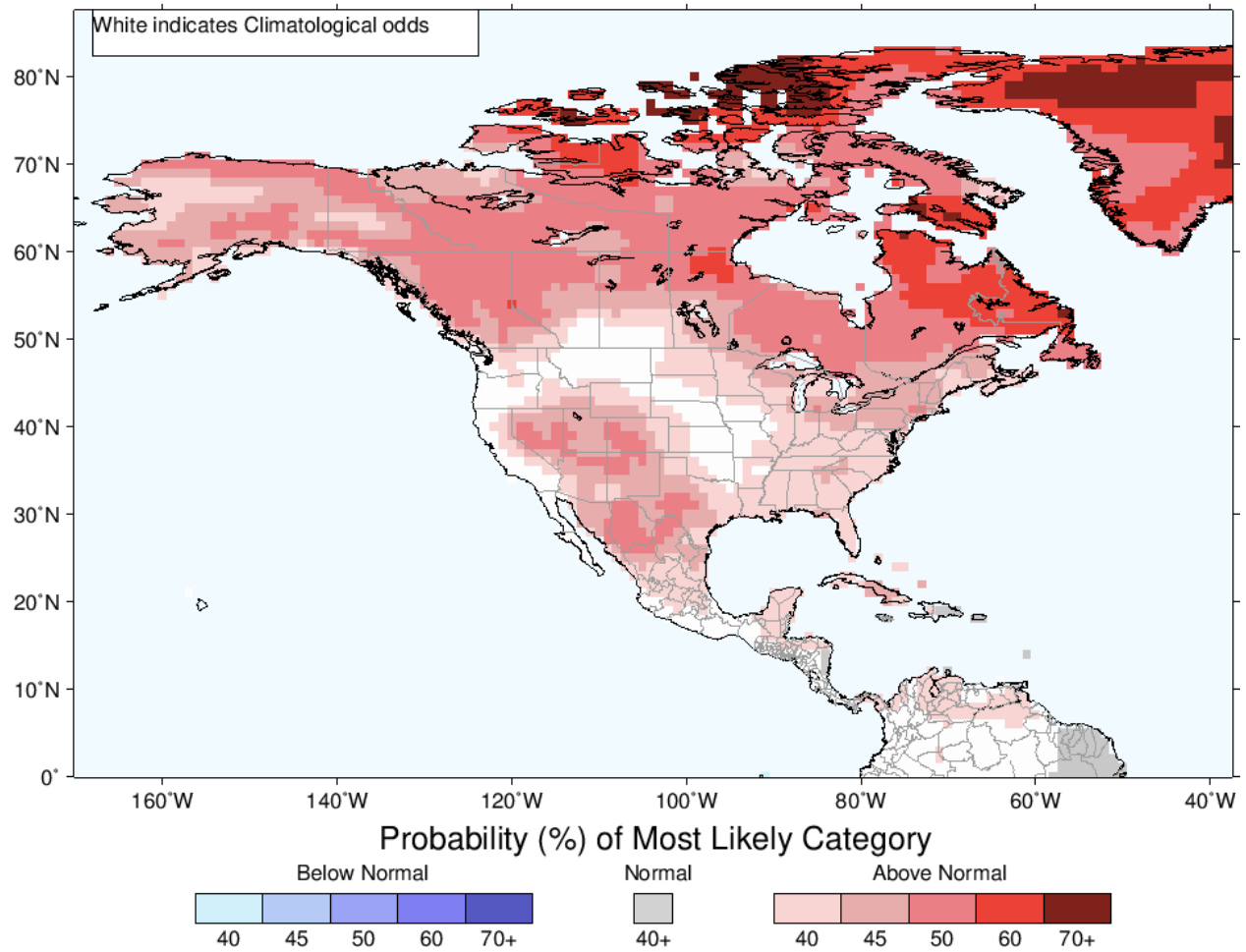
System 5

AMJ 2020



INTERNATIONAL RESEARCH INSTITUTE MODEL

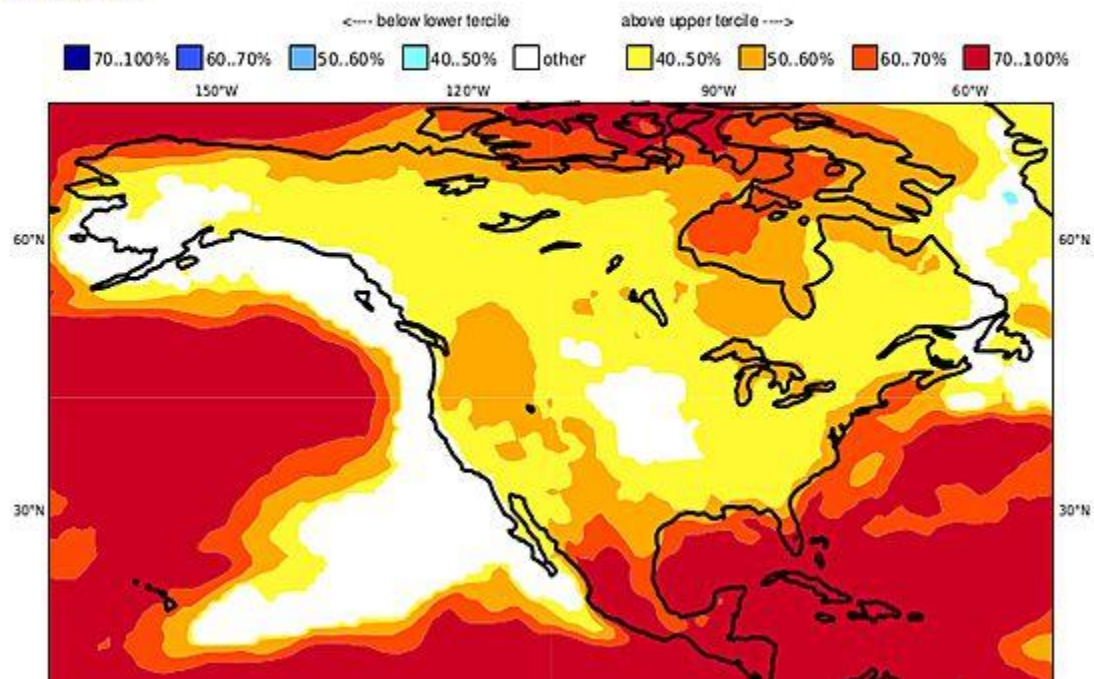
# IRI Multi-Model Probability Forecast for Temperature for April-May-June 2020, Issued March 2020



ENSEMBLE MEAN APRIL-JUNE

C3S multi-system seasonal forecast  
 Prob(most likely category of 2m temperature)  
 Nominal forecast start: 01/03/20  
 Unweighted mean

ECMWF/Met Office/Météo-France/CMCC/DWD/NCEP  
 AMJ 2020



*Disclaimer: This forecast is subject to the inherent limitations of the science of meteorology.*

*While every attempt was made to provide the most accurate forecast possible, it should not be construed as definitive fact. There is a margin of error in all weather forecasting that must be acknowledged and accounted for.*

This forecast is that of the author and does not necessarily represent Murray and Trettel, Inc./Weather Command.

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