

Regatta Weather Forecast

Chloe Ameri & Leah Rimland

Wednesday June 8th, 2022

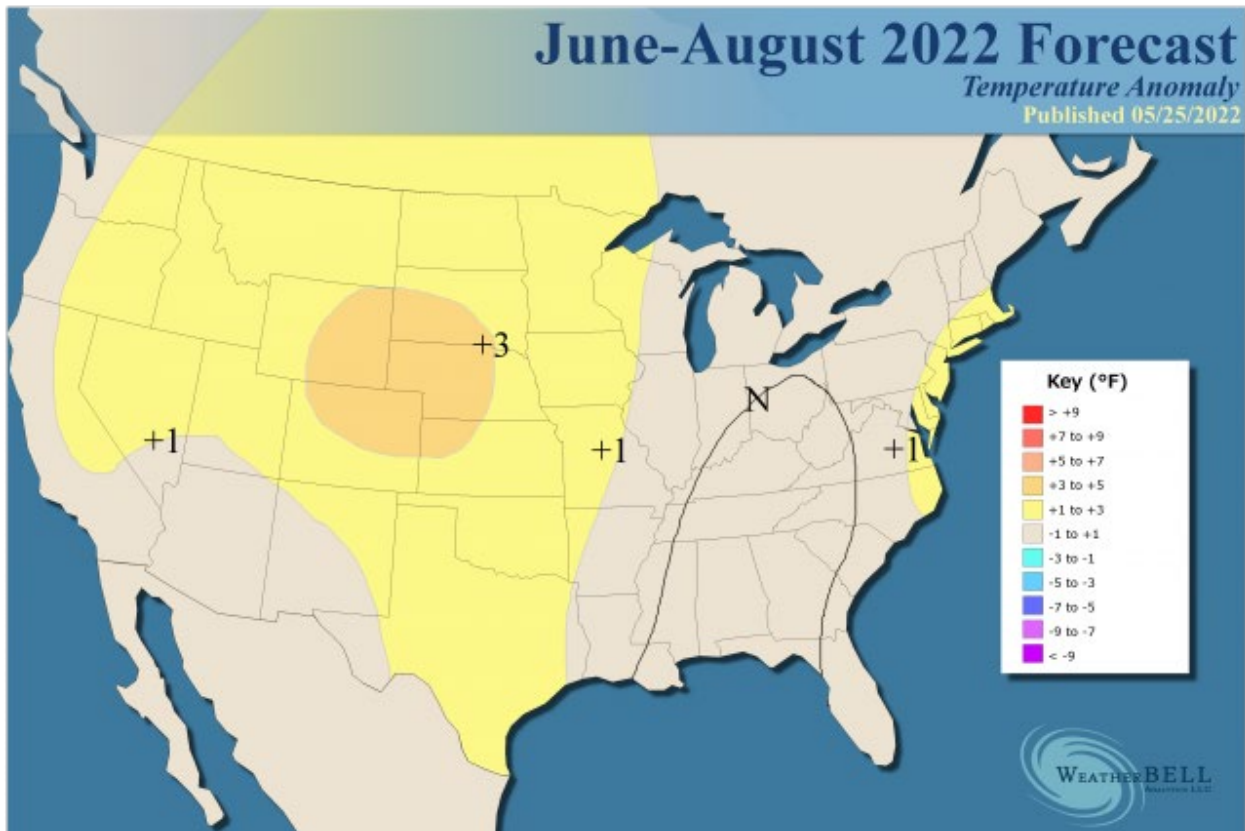
Day forecast:

- Chance of Rain:
 -
- Winds:
 -
- Temperature:
 -
- UV Index:
 -
- How will it affect the boats?
 -

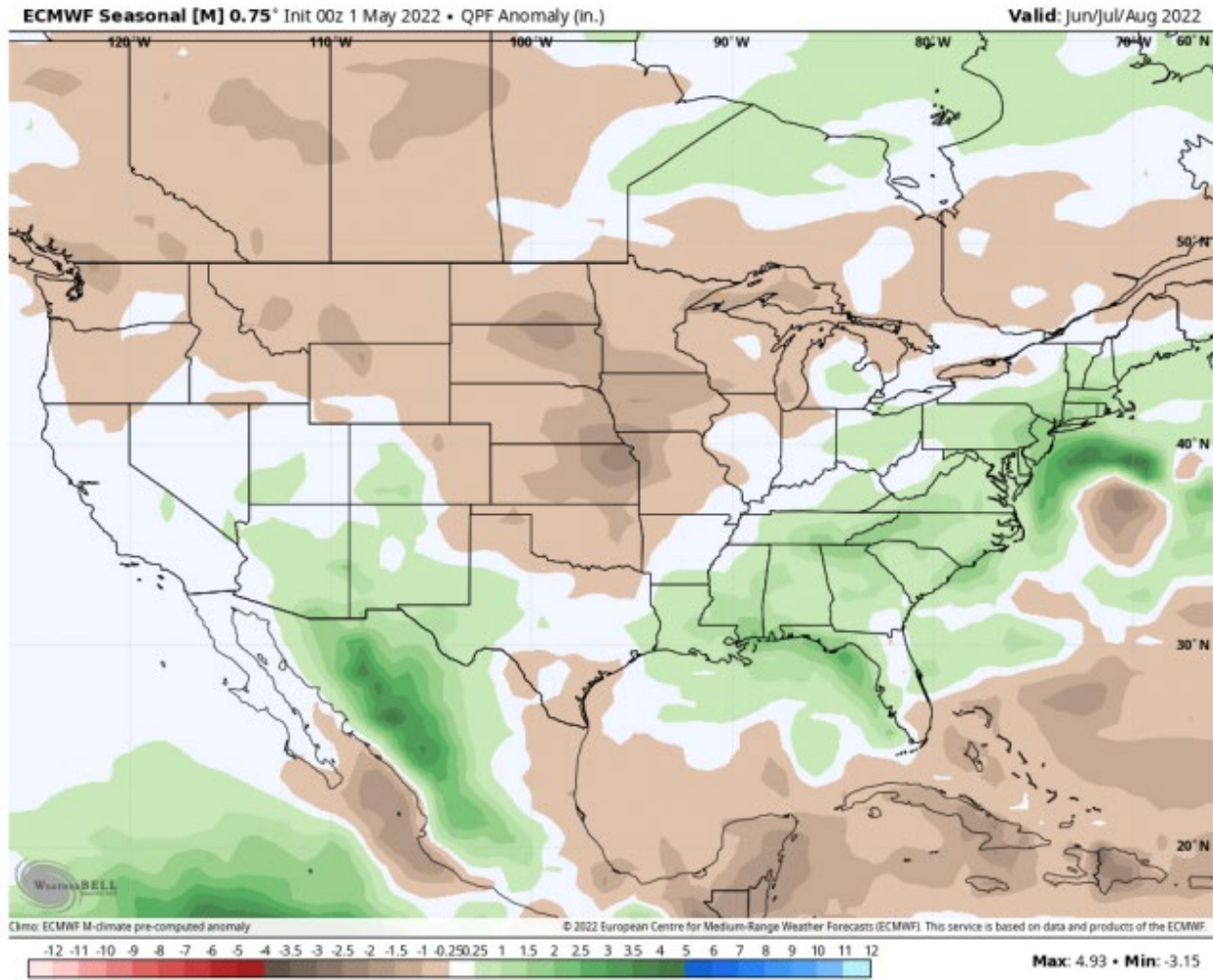
Summer forecast:

- The best chance for the coolest temperatures is over the northern Plains.
- The southern Plains should have a lot of heat to deal with.

The Map



The Euro precipitation forecast:

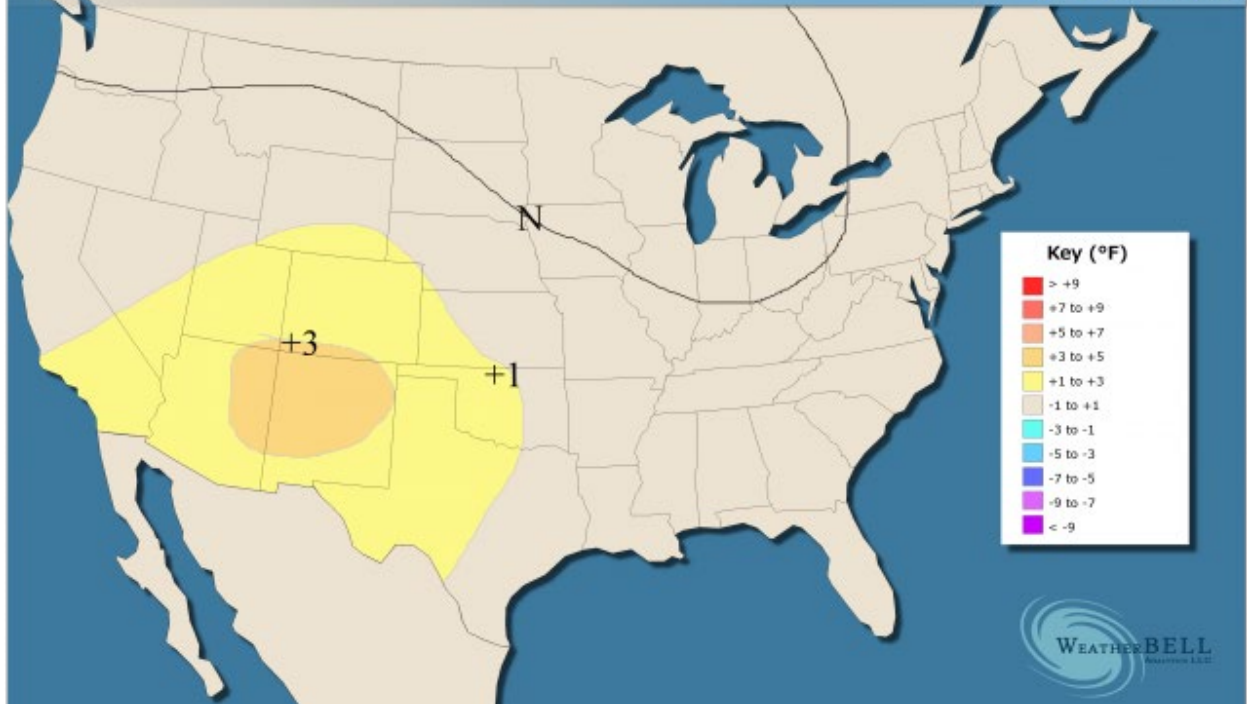


June

June 2022 Forecast

Temperature Anomaly

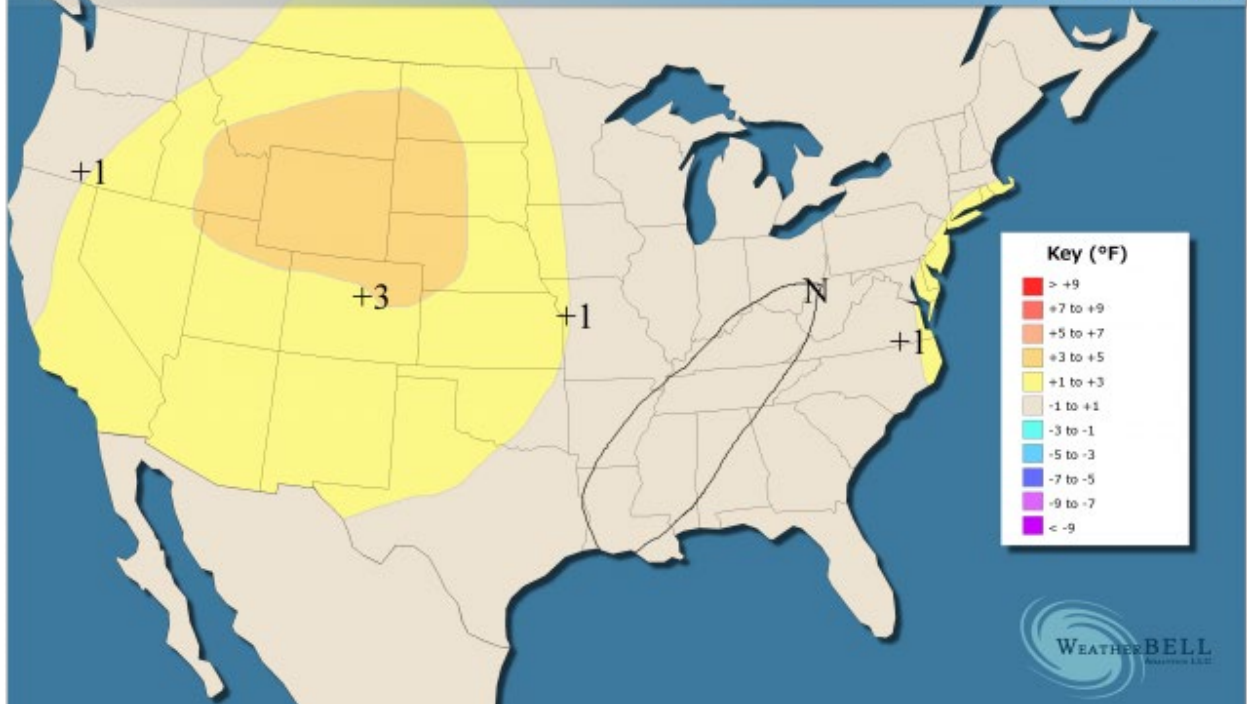
Published 05/24/2022



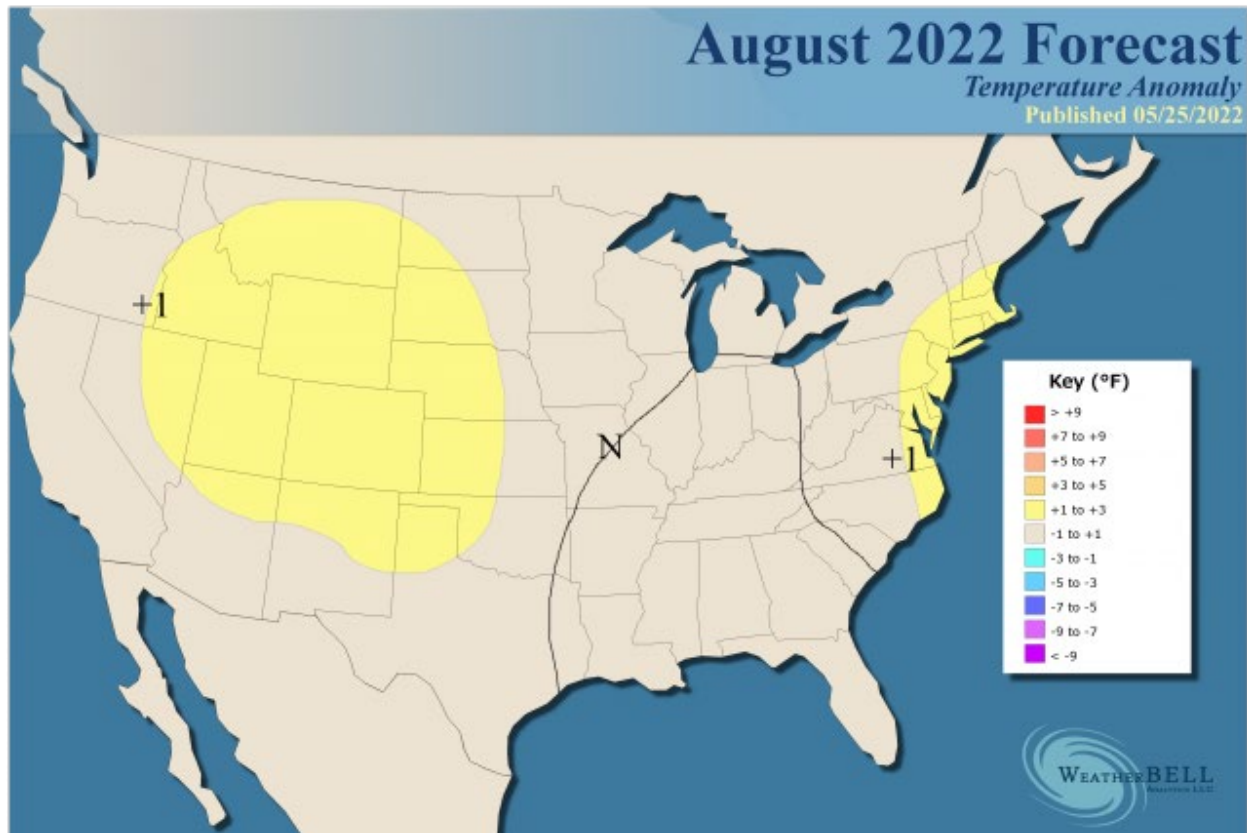
July 2022 Forecast

Temperature Anomaly

Published 05/25/2022



August



The Verdict

Heavy rain over the east in general and a trough near the Northeast coast are influencing June, but the overall pattern should get back on track later in June and July. I think July is going to be the warmest of the three months, relative to averages, as very often Augusts with landfalling tropical cyclones have cool air with them

Hurricane forecast:

- Another high-impact season is anticipated for the U.S. coast.
- Long-tracked, large storms are less likely than in-close, smaller storms that form quickly.
- There will again be plenty of "throw-away" storms to the north of the Main Development Region which will pad the total numbers.
- An enigma concerning the Northeast is analyzed.

- The Western Pacific will again have lower than average activity.

First of all, there are no changes to the total numbers, but I will explain the impact numbers in more detail below.

Named Storms: 18-22

Hurricanes: 6-10

Major Hurricanes: 2-4

Accumulated Cyclone Energy: 140-180

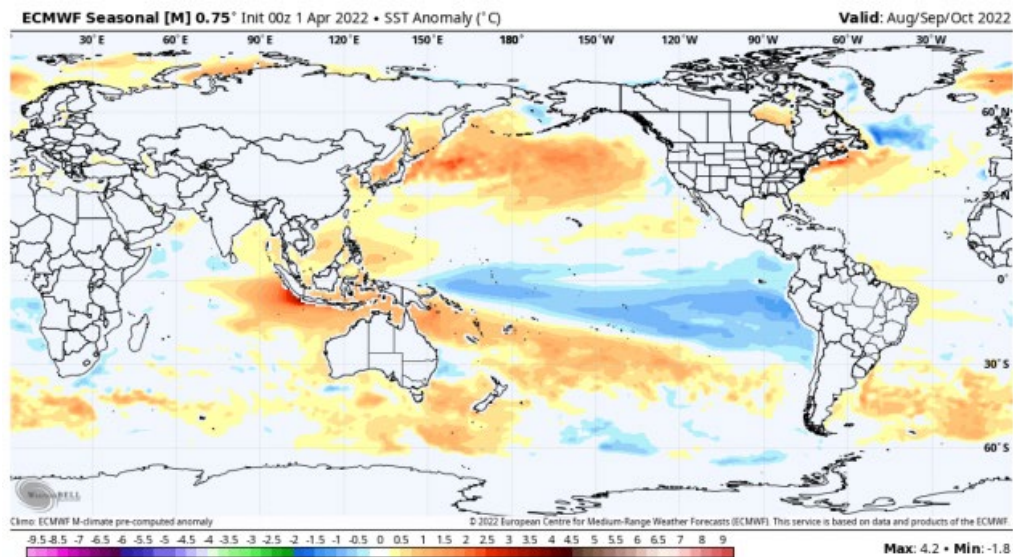
The positives over the top are similar to the analog years of 2003, 2005, 2008, 2017, 2020, and 2021.

Colorado State University has put out their forecast as well:

Very active season: 20 named storms, 10 hurricanes & 5 major hurricanes. Forecast increased from April due to the low chance of El Nino (a La Nina) & warmer than normal tropical Atlantic as shown in the ocean temperature maps below.

2022 FORECAST AS OF 2 JUNE 2022		
Forecast Parameter	CSU Forecast	1991–2020 Average
Named Storms (NS)	20	14.4
Named Storm Days (NSD)	95	69.4
Hurricanes (H)	10	7.2
Hurricane Days (HD)	40	27.0
Major Hurricanes (MH)	5	3.2
Major Hurricane Days (MHD)	11	7.4
Accumulated Cyclone Energy (ACE)	180	123
Net Tropical Cyclone Activity (NTC)	195	135

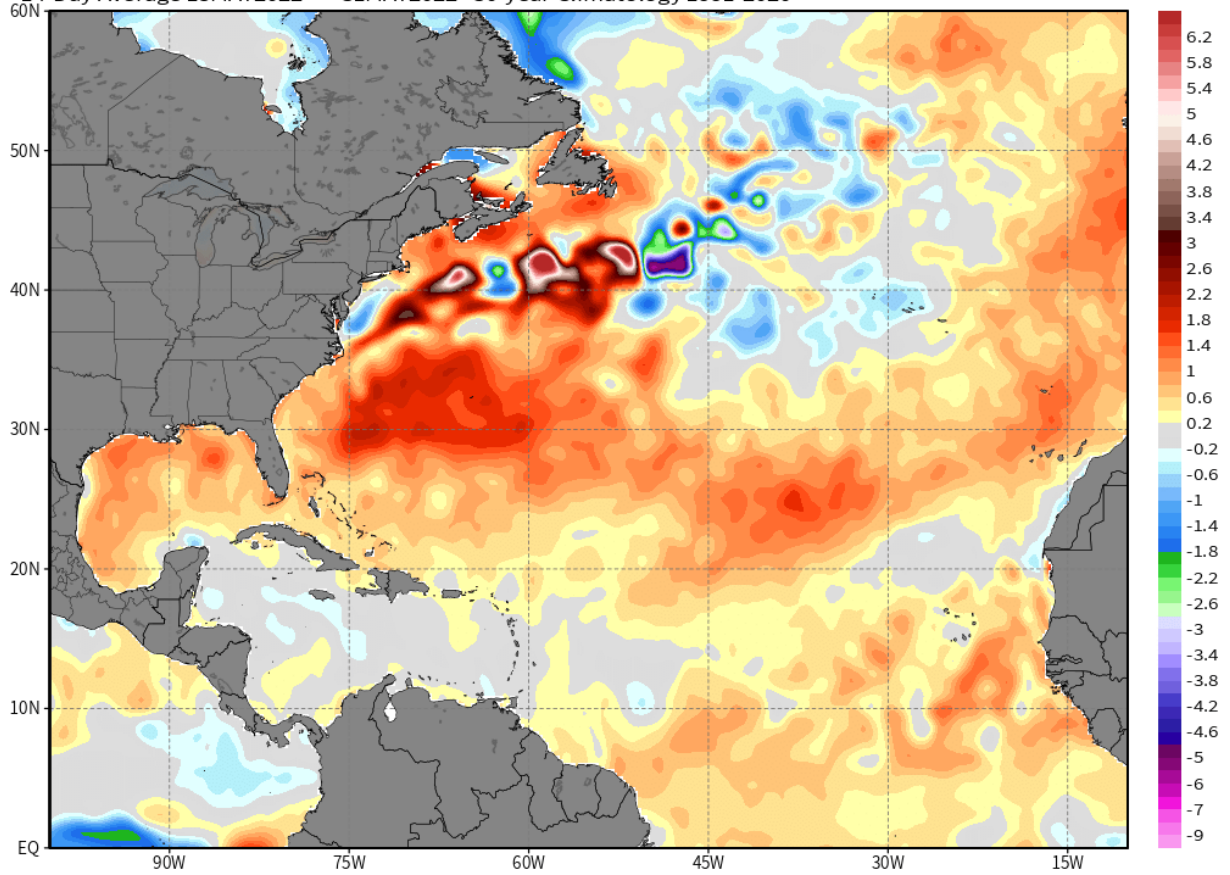
Sea Surface Temperature Map - La Nina is in full effect in the equatorial pacific which helps drive the hurricane season in the HOT-Lantic!!



Why do we say the “Hot” Lantic for the Atlantic? The waters are anomalously warm by 3-4 degrees above their normal average. This is what helps fuel the Tropical Cyclones/ Hurricanes.

0.25° NCEP OISST Sea Surface Temperature Anomaly [SST, °C]
14-Day Average 18MAY2022 --> 31MAY2022 30-year Climatology 1991-2020

weathermodels.com



The water off the SE Coast of America is very warm as well as just offshore mid Atlantic and New England.

Hurricane names this year are:



2022 Atlantic Tropical Cyclone Names

Alex
Bonnie
Colin
Danielle
Earl
Fiona
Gaston

Hermine
Ian
Julia
Karl
Lisa
Martin
Nicole

Owen
Paula
Richard
Shary
Tobias
Virginie
Walter

Names provided by the World Meteorological Organization

Be prepared: Visit hurricanes.gov and follow @NWS and @NHC_Atlantic on Twitter.

May 2022

Impact Map. Here it is in graphic form:

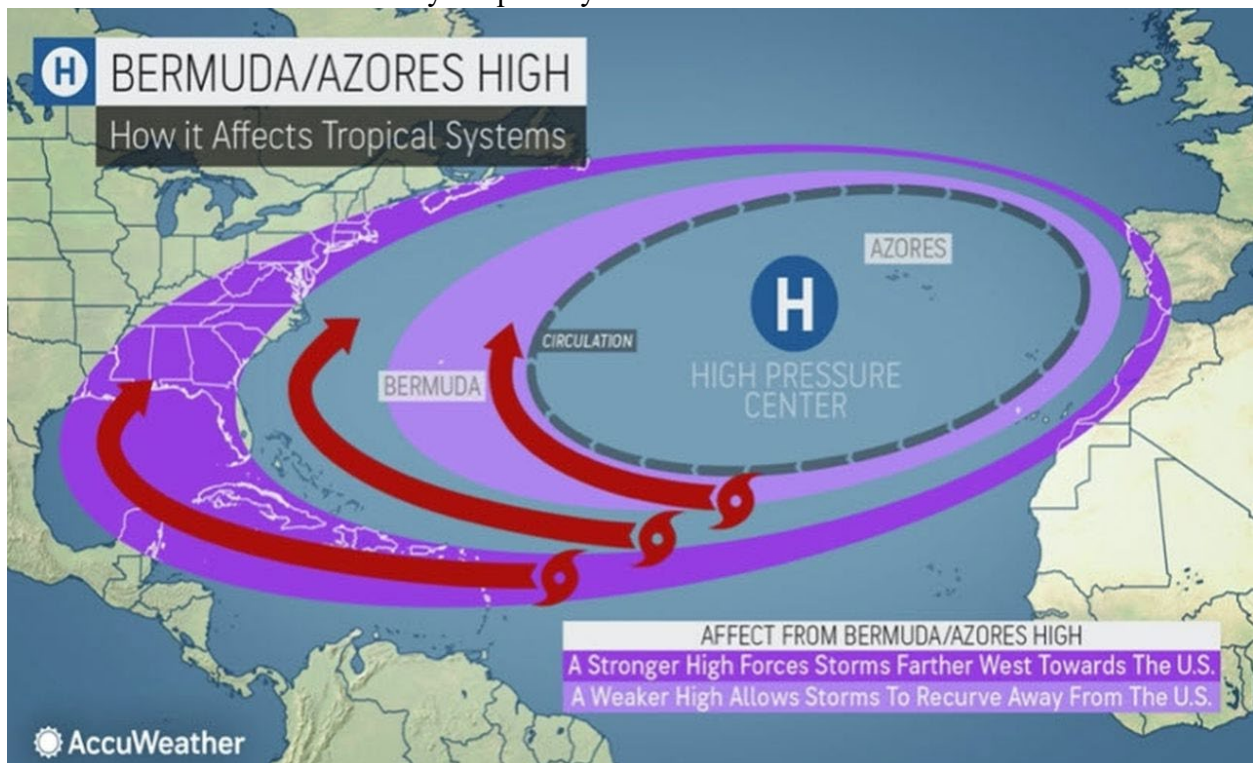
What name will we get up to this year?

Will we here in NJ be affected/impacted by any of these tropical cyclones as we have these past two years with 2020 Fay, and Isaias, 2021 Elsa, and Ida?



***CREDIT → Weather Bell Professional Meteorologist Joe Bastardi

This is how we can be affected by Tropical systems:



UPDATED 6-7-22
June 7, 2022

- This update is homing in on a major impact season.
- The impact numbers were increased from New Orleans to Cape Hatteras.
- Well above average numbers are forecasted in the Northeast.
- The Caribbean numbers have been raised dramatically.
- The Euro Seasonal is the most bullish I have ever seen it in June.
- The total storm statistic forecast (Names Storms, Hurricanes, etc, were not changed).

Named Storms: 18-22

Hurricanes: 6-10

Major Hurricanes: 2-4

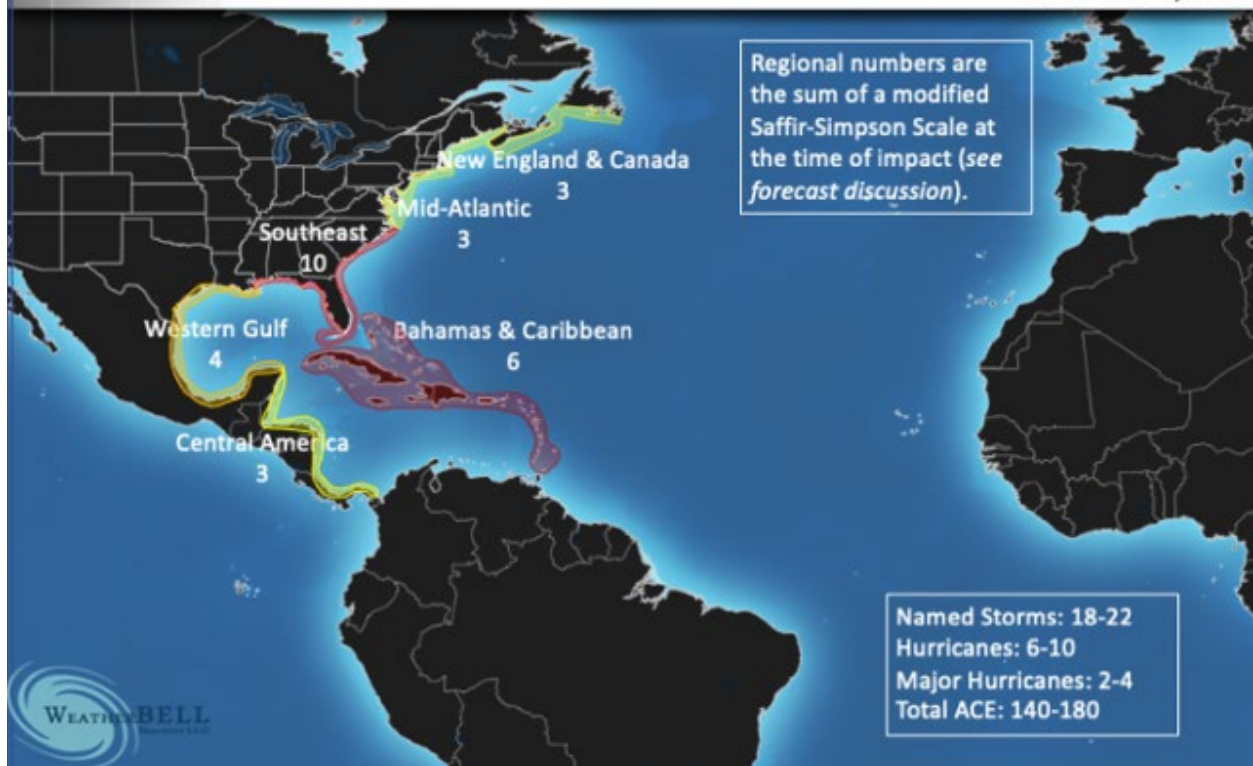
ACE: 140-180

This comes out to an average of around 7 ACE points per storm.

The impact map:

2022 Atlantic Hurricane Season Forecast

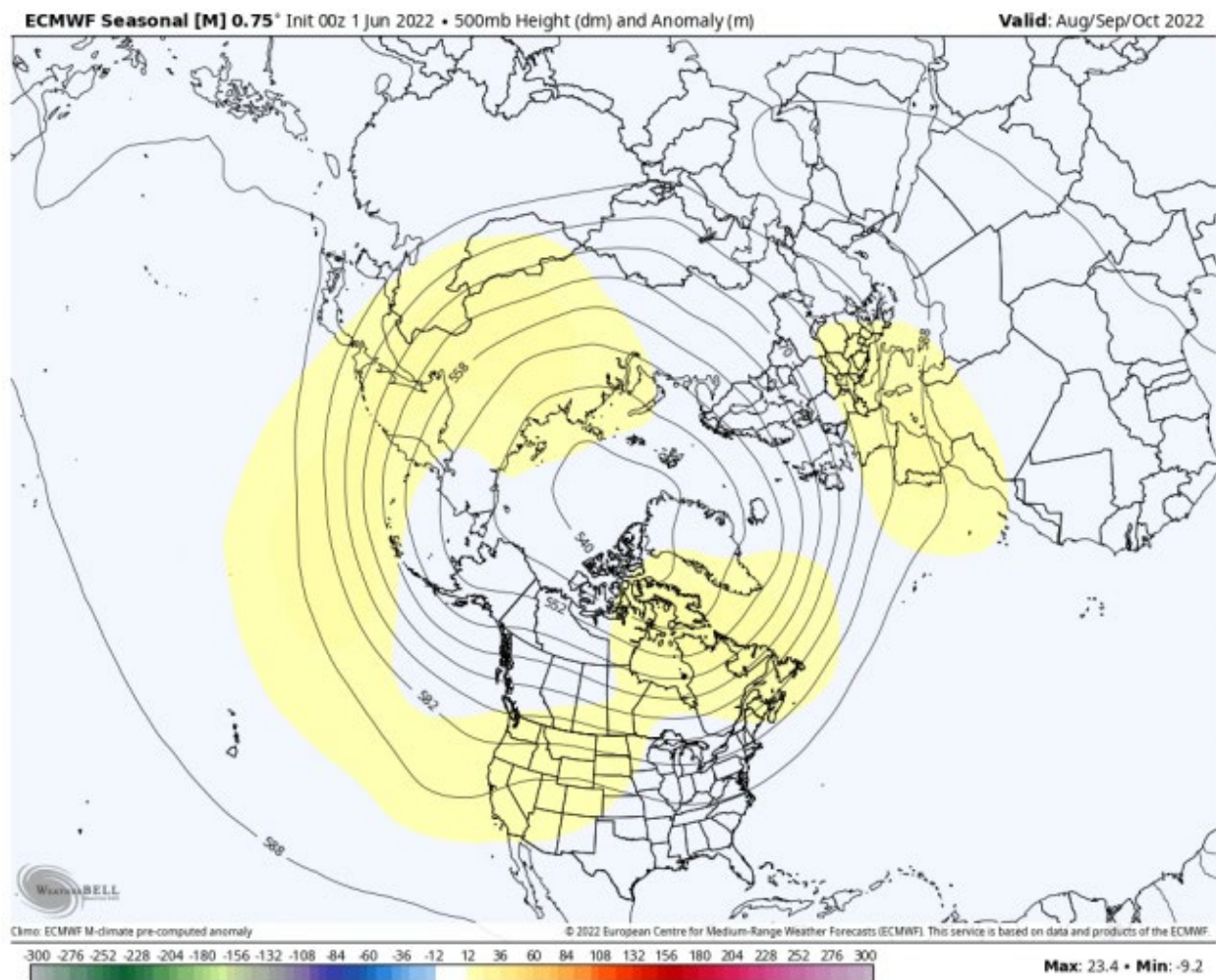
Issued June 7, 2022



Because of the nature of the season, zones are now honed to forecast the total of the Power & Impact Scale of the impactful storms. Each storm is graded on actual effects. If, for instance, a 50 mph tropical storm moves through an area it may get a 0.25. Once to hurricane status, based on the highest wind, each storm is graded in fractional increments from 1.0-5.9. A 200 mph hurricane impact would get 5.9 for that zone (for example).

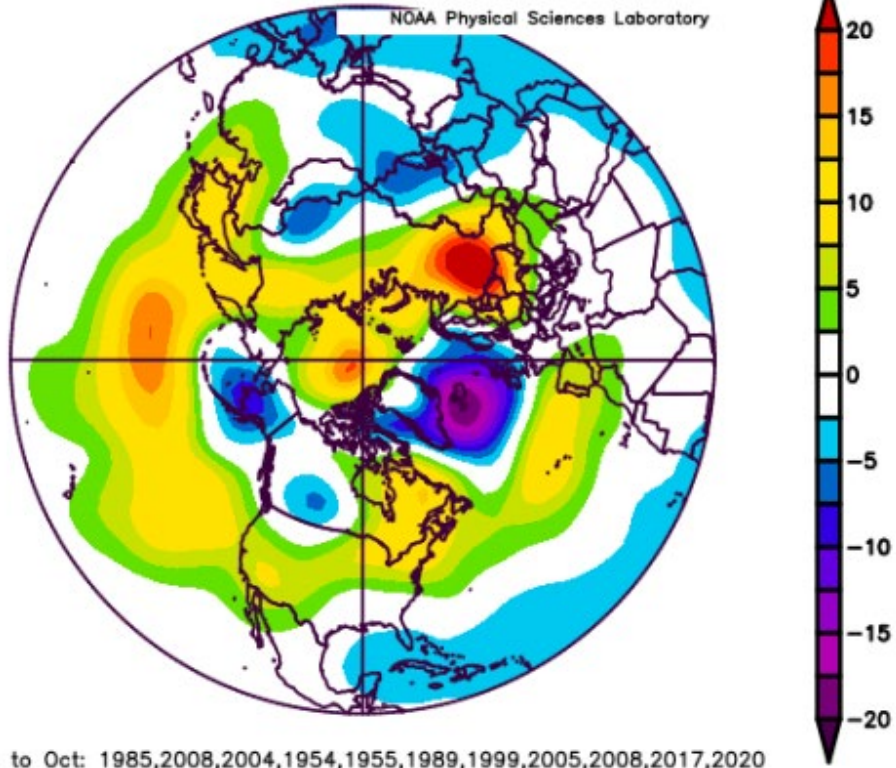
What jumps out is the increase over the Caribbean and the "homing in" on the zone from New Orleans to Cape Hatteras, including Florida. The old map had the Gulf Coast with a very high 7, but I wanted to get more descriptive here. The western Gulf and that part of Mexico get a 4, the east-facing central American coast a 3, but it's the Bahamas to the Caribbean that has been really increased. The 3 in the coastal areas of the Northeast and the zone from Cape Cod to Newfoundland are way above average. Quite frankly, the map, if correct, would mean we have a year that joins 2020, 2017, 2008, 2005, and 2004 as far as destructive potential. Florida is at the center of the cone that spreads out the most.

The Euro Seasonal 500 mb pattern for the heart of the hurricane season:



With the positives over the top back to the southwest, it is similar to those "who's who" years including years the Northeast got hit:

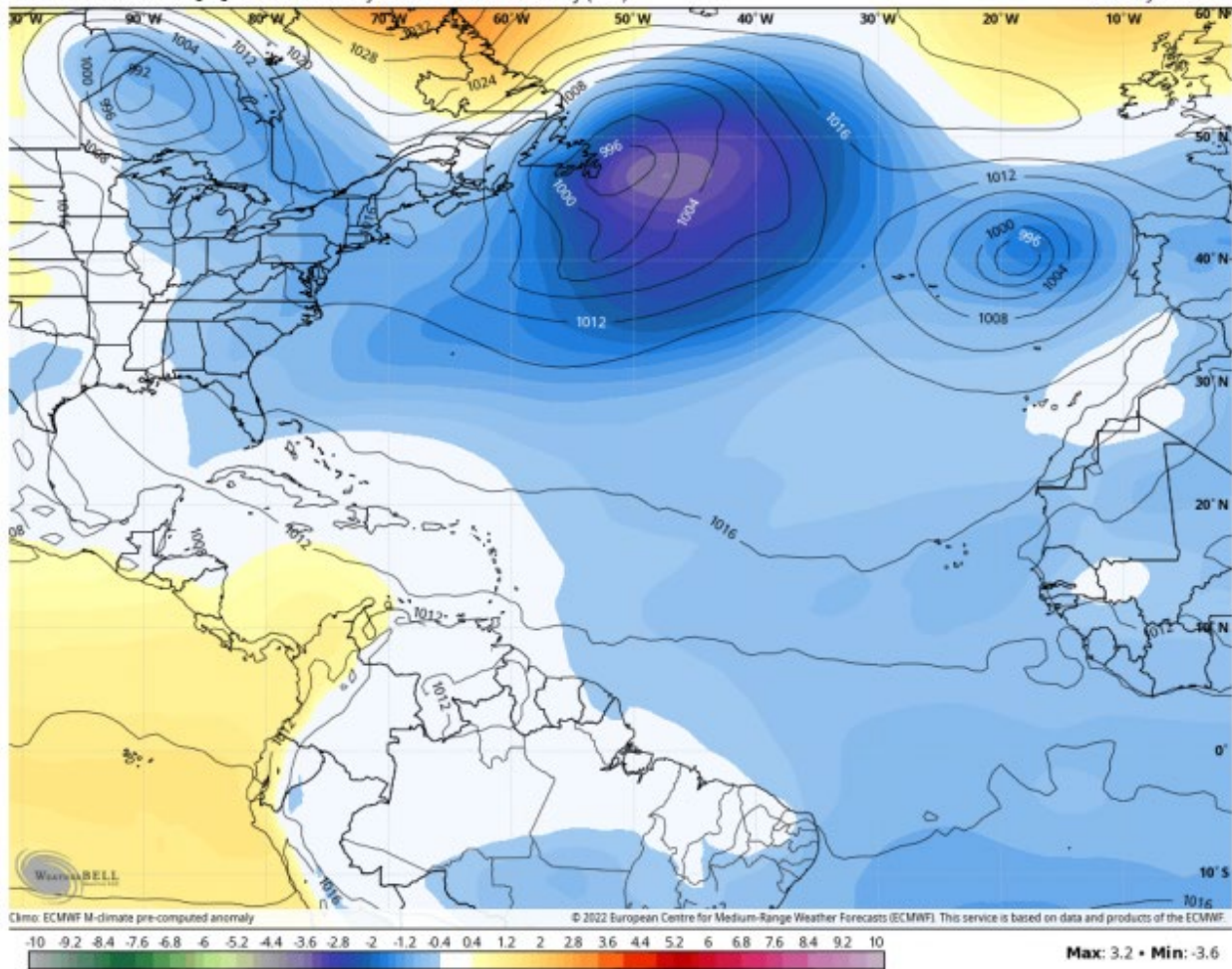
NCEP/NCAR Reanalysis
500mb Geopotential Height (m) Composite Anomaly 1981–2010 climo
NOAA Physical Sciences Laboratory



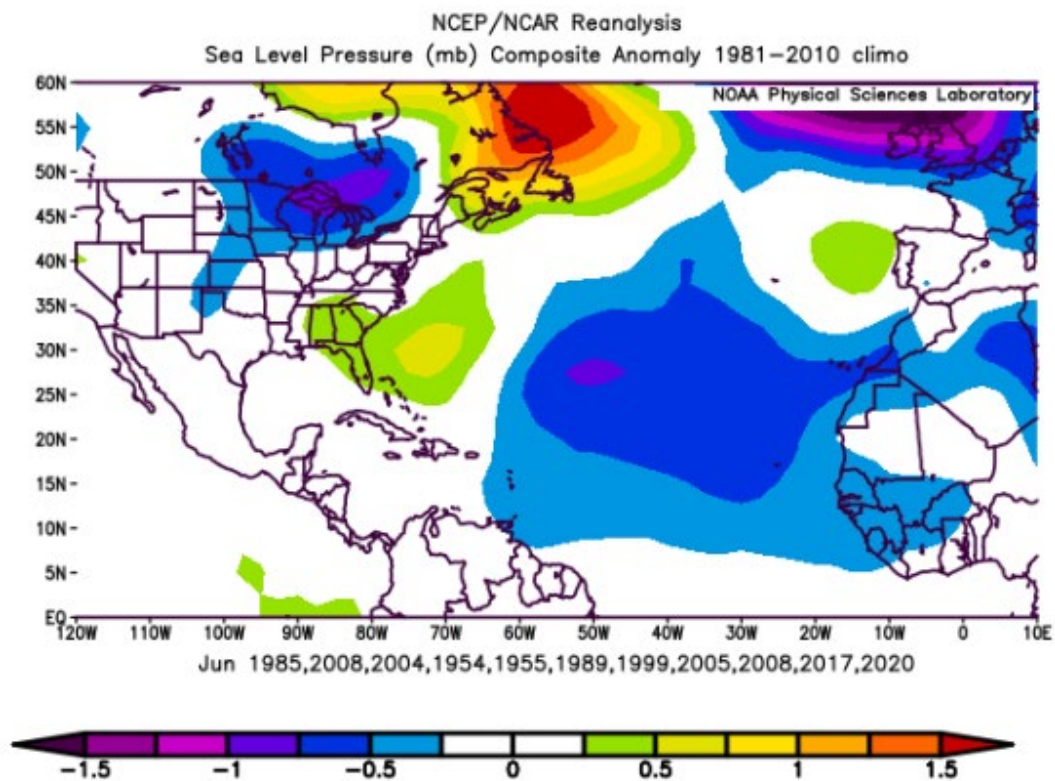
Notice the large-scale negatives over the Tropics, not unlike what the JMA is now seeing. The June Euro Sea Level Pressure forecast has low pressure all over the Atlantic, and that is like setting a time bomb.

ECMWF Seasonal [M] 0.75° Init 00z 1 Jun 2022 • MSLP Anomaly (hPa)

Valid: Jun 2022

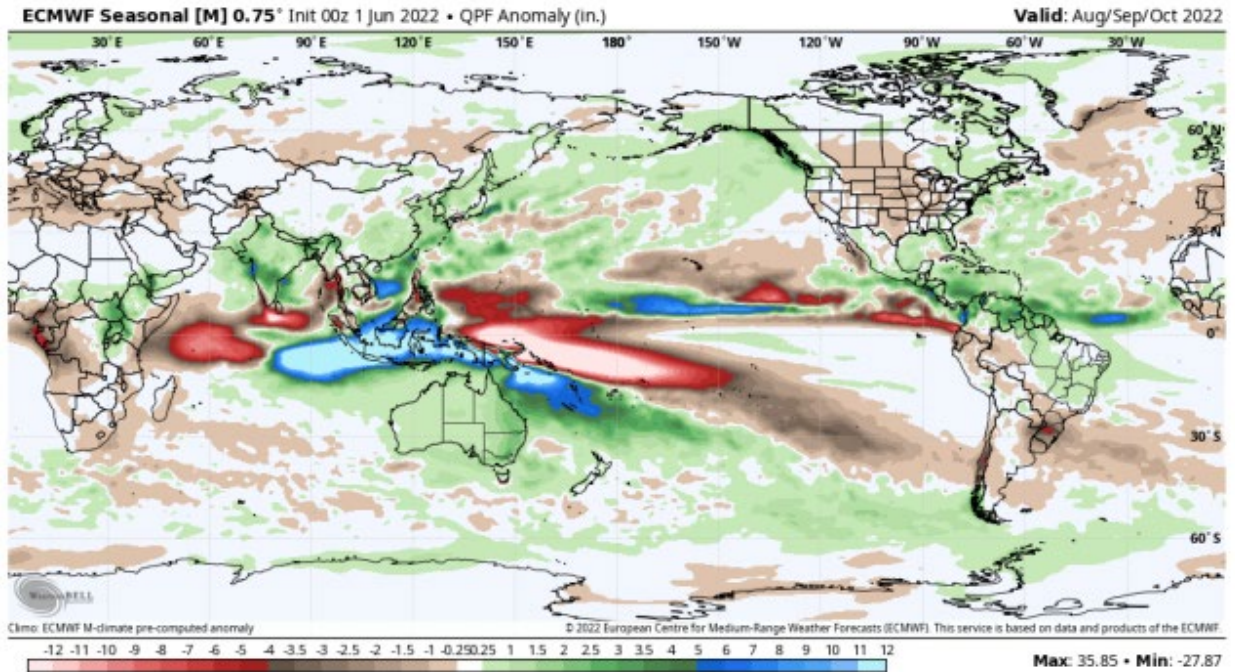


The big hit years:



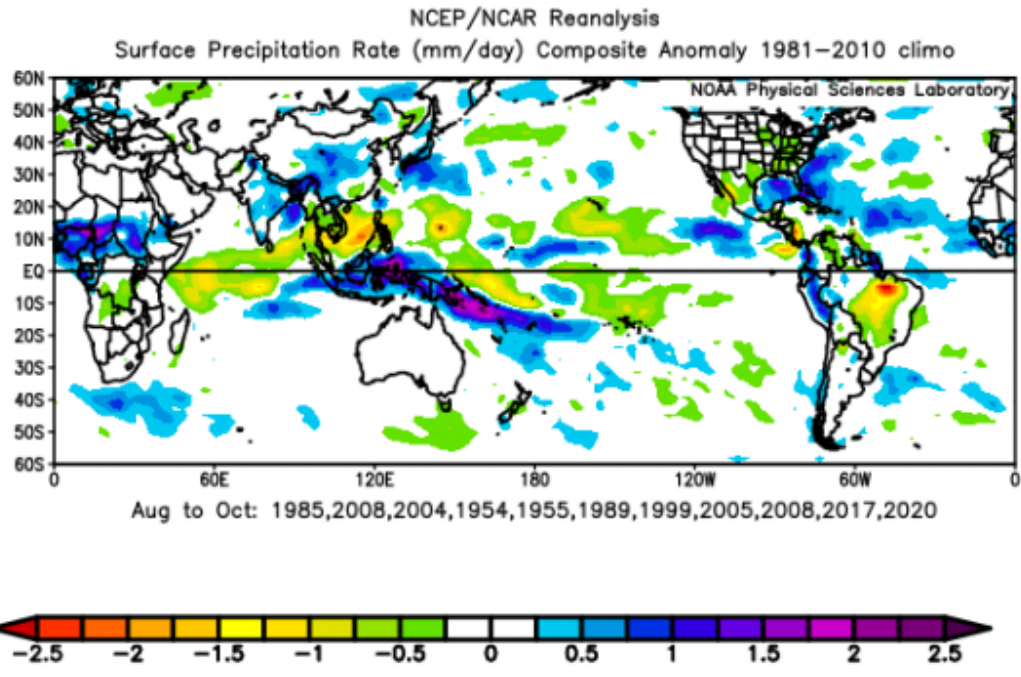
This causes the slowing of the normal easterlies and decreases shear, allowing the moistening of the air through extra convergence and upward motion.

There is also high pressure forecasted through the eastern and central Pacific, along with higher pressures in the North Atlantic for the heart of the season. That means the other change is that we are now expecting more of an active African wave season. Certainly, the precipitation forecasts are now showing that:

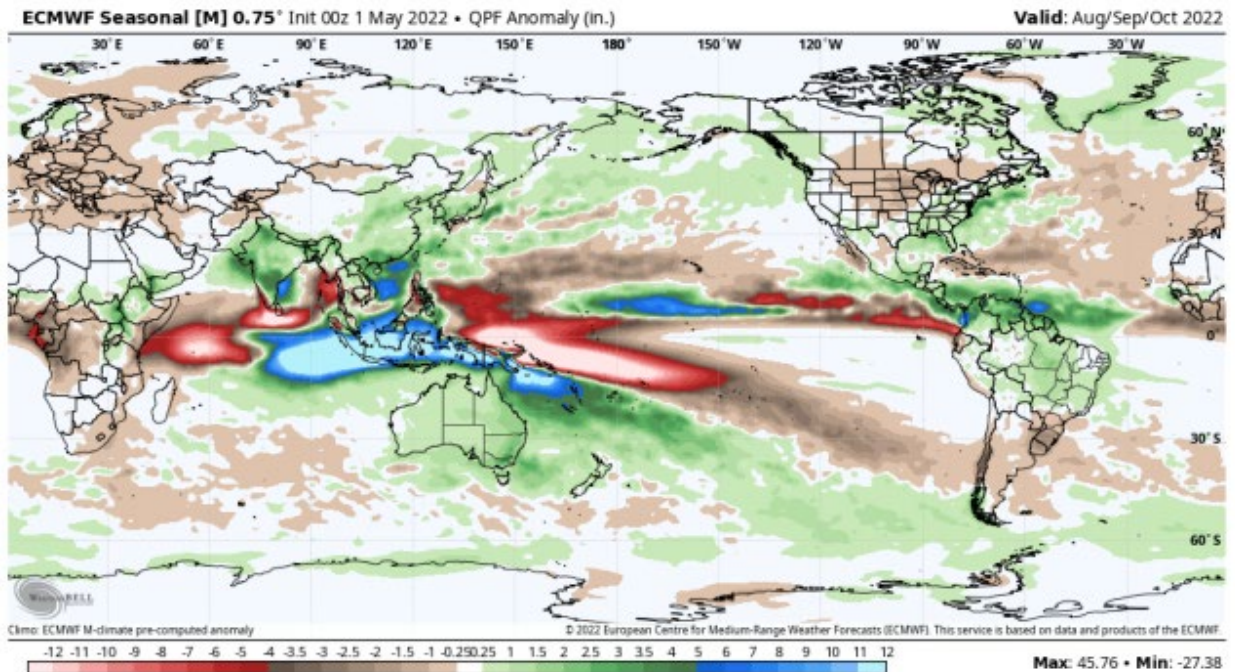


They are now connecting the enhanced African wave train to the heavier in-close areas. This ups the ante for the Bahamas and the Caribbean, hence the change in the impact forecast there.

Again, note the similarities to the high impact analog years:



The previous run:



The Verdict

It is always dangerous to forecast off of a forecast, but when the forecast matches known analogs I have to take the attitude that if I see something I saw something. While the in-close rapid deepener still remains a concern this year, the big change here is there should be longer-tracked storms for the Caribbean and Bahamas and a spray of threats will put Florida as the center point. It's tempting to increase numbers, too, but I always consider that a moot point relative to the impact ideas, which is what we have been pioneering over the years. This looks to be ready to join the who's who of big hurricane years. The western Pacific is going the opposite way yet again, but the Atlantic will try to take up the global slack.