

Has Our Window of OPPORTUNITY Closed?

Meadow's Weather/Climate/Hurricane Analysis: August 2022 Report

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Rainfall & Temperature Data:

Rainfall for month:	8.2 in.
Rainfall year-to-date:	19.8 in.
23 yr. monthly rainfall average:	10.5 in.
Average high temperature:	95.0 F (normal: 92.0 F)
Above normal temperature days:	27
Record high temperature days:	6

Weather & Climate Summary: Climate was added to this month's weather summary because two important pieces of updated information about our changing climate were recently made available. The first involves a future climate problem while the second concerns a serious current situation.

The First Street Foundation, a nonprofit big-data forecasting group just announced a warning to all Florida's west coast residents from Tampa southward to Naples. They warn that rapidly rising temperatures are expected to produce deadly summertime heat index readings topping 125 degrees by 2053. Today in Sarasota County, there are about seven days when heat indices exceed 108 degrees. By 2053 the number of days is predicted to be 28 [*Note – this announcement comes on the heels of last month's similar report from Climate Central*].

Recently, the author completed an investigation into Sarasota's rapidly changing climate. The purpose of this work was to determine the cause(s) and effects of observed changes, and most importantly, to assess today's climate status. *The picture taint pretty!* The results show that during the 2010–2020-decade, Sarasota's yearly average temperature increased so much that the 2015 International Paris Agreement goal of 1.5 degrees centigrade (max.) by year 2030 was reached -- ten years early! What does this mean? We thought we still had eight years to engage in serious climate change mitigation, but apparently time has expired. Sarasota now enters a time when climate change impacts are predicted to go from bad to devastating! [*Note: This new information*

substantiates the findings of a climate change advisory firm in 2018. That year, in a May 24th Herald Tribune editorial, the advisory firm 'Four Twenty Seven', reported that Sarasota and Miami Beach are two of the most exposed cities in the country to sea level rise, and Manatee and Sarasota are among the most susceptible counties to overall climate change risks (impacts).

Making the situation even more dire are the results of an on-going temperature study being conducted in the Meadows. At present, this study shows that monthly daytime high temperatures for the past two-plus years have exceeded the monthly normal value in 32 out of 33 months. The rate of temperature increase didn't level off, or end in 2020 – it continues to accelerate beyond the 1.5 C target!

This raises the question: *Has the window of OPPORTUNITY (to effectively mitigate our rapidly changing climate) closed?* This is something everyone should contemplate.

Temperature Analysis: How many daytime temperature records were broken in August? Six. Since summer's start, twenty-two records have fallen by the wayside. Depending upon what transpires during the first-three weeks of September, summer 2022 may enter the record books as one of the warmest on record, if not the warmest!

Other August temperature statistics include monthly daytime temperatures averaging three degrees above normal and twenty-seven above normal temperature-days.

Rainfall Analysis: There were no rainfall records in August and the streak of four consecutive months in which monthly totals exceeded normal, was broken as the August rainfall total was 22% below normal. However, the year-to-date total provides some assurance that the normal yearly expectation (52 inches) is still achievable.

Monthly temperature and rainfall data are presented in the graph.

Hurricane Season Analysis: *The 2022 hurricane season is off to a slow start.* That was the opening line in last month's column. And as August winds down -- three months into the hurricane season -- not much has changed. This is the slowest start to a hurricane season since 1988. Although the recipe makeup for this year's early predictions has changed little, several new ingredients found their way into

the recipe book early in the season and served to inhibit tropical cyclone development for three consecutive months. One of these ingredients is the prolonged northward shift in the jet stream. A second, and very influential ingredient -- one mentioned last month -- is the persistent stream of high-level Saharan dust that extends from Africa to the Gulf of Mexico.

There is evidence at the time of this writing that the inhibiting ingredients may be waning because there are several Atlantic tropical waves on the horizon that have the potential for development.

Due to the persistent high temperatures discussed previously, our atmosphere remains energized (unstable) and the gulf waters continue to run warmer than normal. For this reason, its best to stay on the side of caution by remaining vigilant for the final two months of this hurricane season.

Send comments and questions about this month's report to:
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Meadows Rainfall and High Temperatures

August 2022



