



**MIAMI-SOUTH FLORIDA**  
**National Weather Service**  
**Forecast Office**  
<http://www.weather.gov/miami>

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## Summer 2024 Weather Summary

### Top 10 Warmest Summer on Record

### Mostly Above Normal Rainfall

**September 3<sup>rd</sup>, 2024:** Now that meteorological summer (June-August) has concluded, here's a look back at the observed temperatures and precipitation across South Florida.

South Florida's summer weather pattern fluctuated from lower-than-normal pressures and southerly wind flow from the deep tropics during the first half of June, to one dominated by the subtropical high pressure and resultant easterly wind over the western Atlantic from the second half of June through most of July. In August, the mean wind was mostly out of the south and southwest, due in part to the influence from Hurricane Debby in the eastern Gulf of Mexico on the 3<sup>rd</sup> and 4<sup>th</sup>.

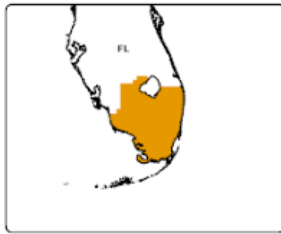
June started dry across most of South Florida, with moderate to severe drought conditions from the Everglades east to metro Broward and Palm Beach counties. A flow of deep tropical moisture affected the region during the period from June 10-15 as a [tropical disturbance moved across the Florida peninsula](#) on June 12<sup>th</sup>. Several days of copious rainfall led to major flash flooding across parts of South Florida, mainly in the northern Miami-Dade and southern Broward County metro areas where 2-day rainfall totals of 15 to 20 inches were observed (Figure 1). Rainfall totals of 10-20 inches were common across most of Collier County (highest values over the eastern sections of the county), with generally 5-8 inches elsewhere across the region. This rainfall quickly ended the late spring drought.



# National Weather Service Miami Florida

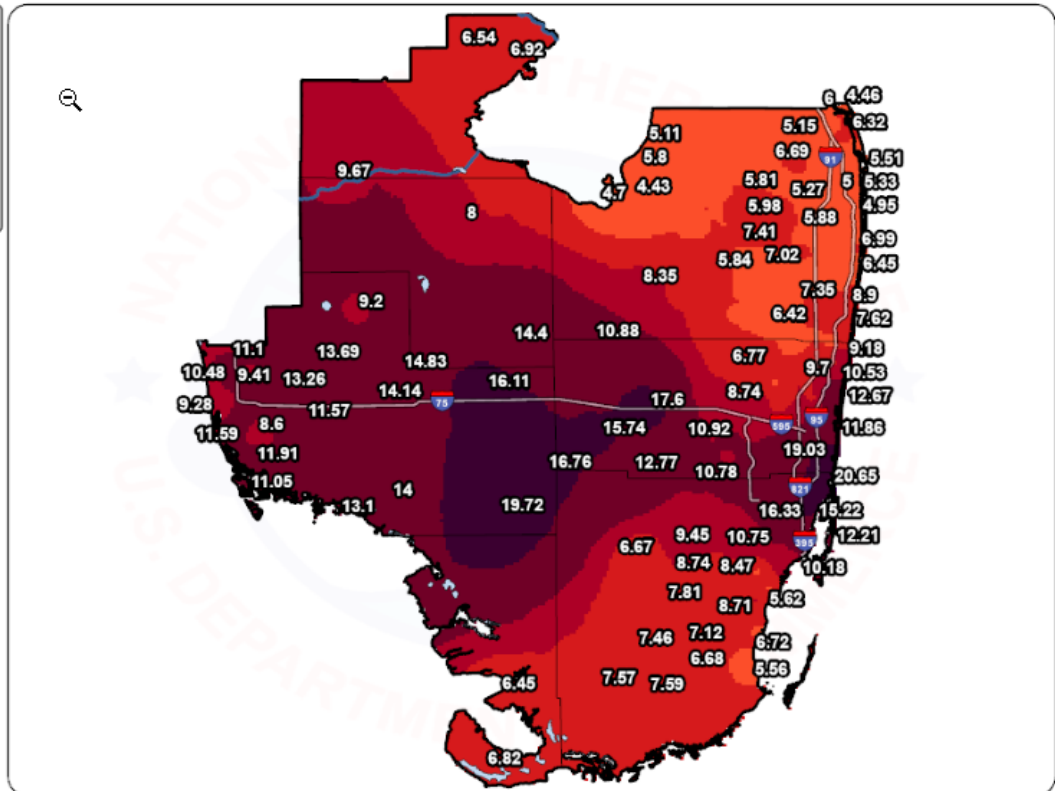
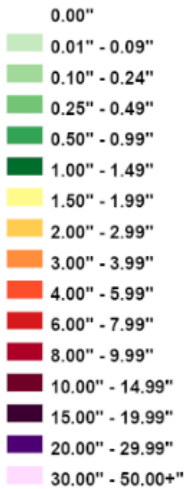
Rainfall Amounts from 06/11/24 to 06/13/24

Analysis Data Source: Regional Observations



Created:  
06/18/2024 03:06PM

### Precipitation (in)



This is an experimental product of the NWS GAZPACHO software package. Care should be taken in using the data. Unofficial observations may be plotted. Values at interpolated locations may not represent actual reports at that location.



*Figure 1: 2-day rainfall totals from June 11-13*

The predominant easterly wind pattern following the tropical disturbance through most of July contributed to a rather wide disparity in rainfall during this time frame. Most of Southwest Florida received above normal rainfall in July from near-daily afternoon thunderstorms resulting from the Gulf sea breeze interacting with the prevailing east wind flow. Naples Municipal Airport measured 14.47" of rainfall, the 3<sup>rd</sup> wettest July on record. Meanwhile, much of metro SE Florida was drier than normal with some areas receiving less than half of the average monthly total, including West Palm Beach with 1.90 inches and Fort Lauderdale/Hollywood International Airport with 2.59 inches.

On August 3<sup>rd</sup>, a tropical disturbance over Cuba became [Tropical Storm Debby](#) over the lower Straits of Florida, then moved northwest and north over the eastern Gulf of Mexico on August 4<sup>th</sup> and 5<sup>th</sup>, reaching hurricane strength before landfall in the Florida Big Bend on the 5<sup>th</sup>. Bands of heavy rainfall and gusty winds began affecting South

Florida on August 3<sup>rd</sup>, continuing through August 5<sup>th</sup>. The highest rainfall totals were in western Collier County in closest proximity to the center of Debby, with 2-day rainfall totals of 6-8 inches common over the greater Naples area. This, combined with a storm tide of 3 feet, led to significant flooding across this region. Elsewhere across South Florida, rainfall totals were mostly in the 2–4-inch range. The rest of August was characterized by a moist south to southwest wind flow with above normal rainfall fairly evenly distributed across the southern peninsula.

The end result for the summer was above normal precipitation, most notably in Collier County where Naples received just over 40 inches, their second wettest summer on record going back to 1942. Most areas ranked in the top 10 wettest summer going back at least 20-25 years.

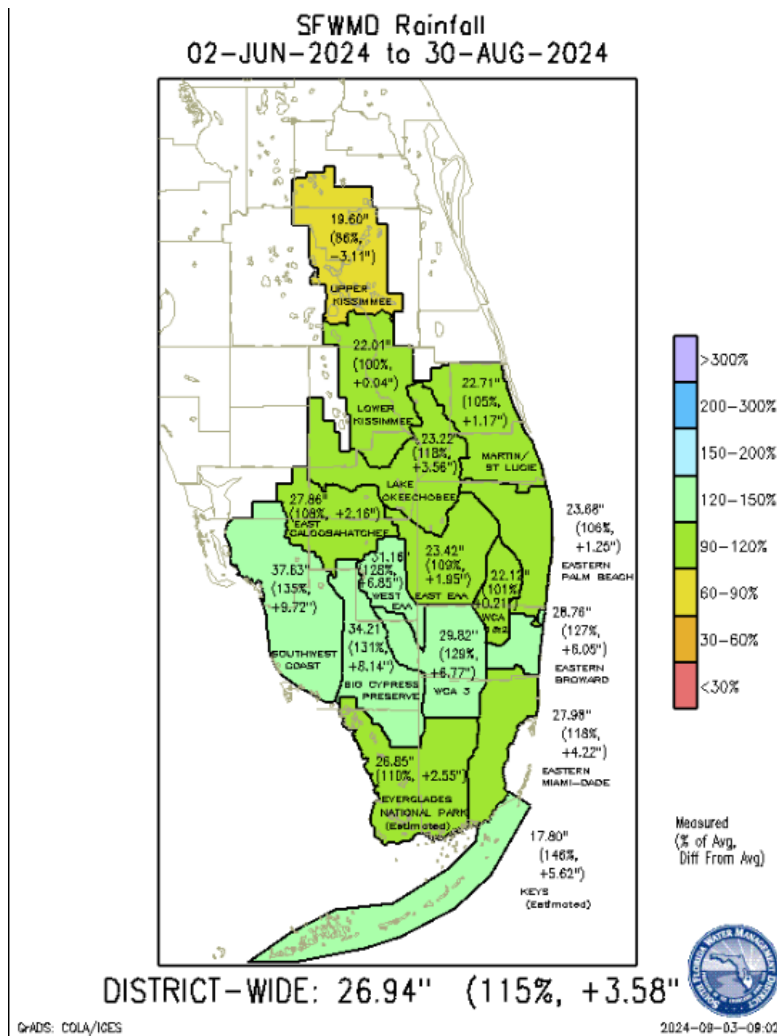


Figure 2: Summer 2024 rainfall and departure from normal courtesy of South Florida Water Management District

Below is a table of summer rainfall and departure from normal for official reporting sites across South Florida (arranged in order of highest to lowest totals):

<b>Location</b>	<b>Summer 2024 Rainfall (inches)</b>	<b>Departure from Normal</b>	<b>Top 20 Rank</b>
<b>Naples Municipal Airport</b>	<b>40.24</b>	<b>+16.17</b>	<b>2<sup>nd</sup> wettest</b>
<b>Marco Island</b>	<b>36.85</b>	<b>+12.73</b>	<b>3<sup>rd</sup> wettest since 2002</b>
<b>Hialeah</b>	<b>35.87</b>	<b>+6.52</b>	<b>7<sup>th</sup> wettest</b>
<b>Miami International Airport</b>	<b>35.61</b>	<b>+8.16</b>	<b>11<sup>th</sup> wettest</b>
<b>North Miami Beach</b>	<b>33.32</b>	<b>+6.71</b>	<b>3<sup>rd</sup> wettest</b>
<b>Ft. Lauderdale/Hollywood Int'l Apt</b>	<b>31.99</b>	<b>+9.14</b>	<b>11<sup>th</sup> wettest</b>
<b>Pembroke Pines – North Perry Apt</b>	<b>31.64</b>	<b>+7.61</b>	<b>4<sup>th</sup> wettest</b>
<b>Homestead General Airport</b>	<b>31.17</b>	<b>+4.52</b>	<b>5<sup>th</sup> wettest</b>
<b>NWS Miami – FIU</b>	<b>31.04</b>	<b>+1.16</b>	<b>10<sup>th</sup> wettest</b>
<b>Opa-Locka Airport</b>	<b>30.38</b>	<b>+5.25</b>	<b>5<sup>th</sup> wettest</b>
<b>Cape Florida</b>	<b>29.74</b>	<b>+9.68</b>	<b>Wettest since 1998</b>
<b>Devils Garden</b>	<b>27.43</b>	<b>+1.49</b>	
<b>Muse</b>	<b>26.29</b>	<b>-1.73</b>	
<b>Fort Lauderdale Executive Airport</b>	<b>25.71</b>	<b>+5.48</b>	<b>5<sup>th</sup> wettest</b>
<b>Miami-Tamiami Executive Airport</b>	<b>22.04</b>	<b>-2.25</b>	
<b>Pompano Airpark</b>	<b>21.26</b>	<b>+1.65</b>	
<b>Palm Beach International Airport</b>	<b>20.37</b>	<b>-2.42</b>	

As has been the trend for well over a decade, temperatures averaged above normal, ranking in the top 10 warmest on record. While this past summer’s average of daily maximum temperatures was slightly lower than last year’s record-setting values, the average daily minimums were mostly higher than last year. For example, both West Palm Beach (25) and Fort Lauderdale (43) had at least twice as many days with low temperatures of 80F or higher than last year.

Summer 2024 temperature summaries for the 4 main climate sites are below:

- **Miami International Airport** had an average summer temperature of 84.6 degrees Fahrenheit. This is 0.9 degrees above the 30-year normal and ties the 7<sup>th</sup> warmest summer on record. Miami observed 67 days of temperatures at or above 90 degrees this summer, which is just above the normal total of 64 days. The highest temperature was 98 degrees on August 15<sup>th</sup>, and the lowest was 73 degrees on August 9<sup>th</sup>. A total of 8 daily high minimum temperature records were tied or broken, and 2 daily high temperature records were tied or broken.

- **Fort Lauderdale/Hollywood International Airport** had an average summer temperature of 84.6 degrees Fahrenheit. This is 1.2 degrees above the 30-year normal, and ties their warmest summer on record set in 2010. Fort Lauderdale observed 68 days of temperatures at or above 90 degrees, which is well above the normal total of 49 days. The highest temperature was 96 degrees on August 7<sup>th</sup>, and the lowest was 74 degrees on June 4<sup>th</sup>, June 12<sup>th</sup>, June 30<sup>th</sup>, August 22<sup>nd</sup>, and August 29<sup>th</sup>. A total of 14 daily high minimum temperature records were tied or broken.

- **Palm Beach International Airport** had an average summer temperature of 84.3 degrees Fahrenheit. This is 1.7 degrees above the 30-year normal and is the 5<sup>th</sup> warmest summer on record. West Palm Beach observed 66 days of temperatures at or above 90 degrees, which is above the normal total of 55 days. The highest temperature was 96 degrees on July 28<sup>th</sup> and August 19<sup>th</sup>. The lowest temperature was 71 degrees on June 4<sup>th</sup>. A total of 11 daily high minimum temperature records were tied or broken, and 1 daily high temperature records was broken.

- **Naples Municipal Airport** had an average summer temperature of 84.3 degrees Fahrenheit. This is 1.4 degrees above the 30-year normal and ties the 3<sup>rd</sup> warmest summer on record. Naples observed 76 days of temperatures at or above 90 degrees, which is above the normal total of 64 days. The highest temperature was 96 degrees on July 3<sup>rd</sup>, July 4<sup>th</sup>, August 1<sup>st</sup>, and August 2<sup>nd</sup>. The lowest was 73 degrees on June 1<sup>st</sup>, June 3<sup>rd</sup>, and June 4<sup>th</sup>. A total of 7 daily high minimum temperature records were tied or broken, and 5 daily high temperature records were tied or broken.

**Heat advisories** were issued for the following number of days per county this summer:

Miami-Dade: 40

Broward: 39

Palm Beach: 29

Collier: 29

Hendry: 19

Glades: 19

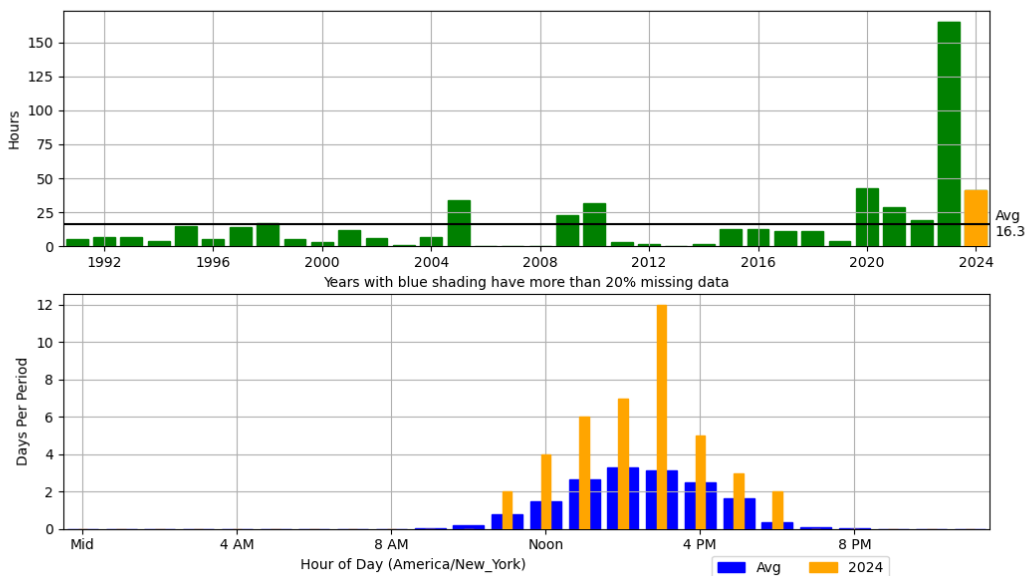
(NOTE: 3 heat advisories were issued in May which are not included in the above totals)

No Excessive Heat Warnings were issued.

Below are graphs (Figures 3-8) courtesy of [IEM](#) showing the number of hours with heat index values at or above 105F at several airport locations (2024 values at the far right in orange):

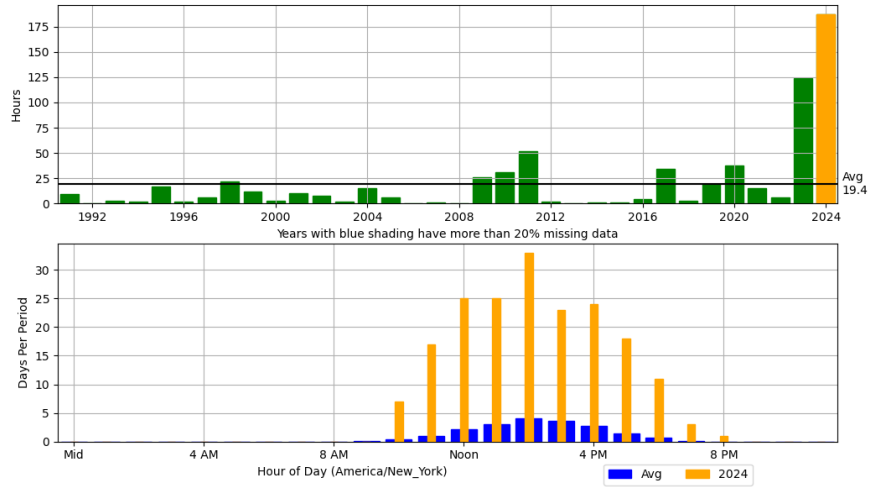


( Jun 1 thru Aug 31) Feels Like Temp (F) Hours At or Above 105F  
[MIA] MIAMI INTL AIRPORT:: (1991-2024)





( Jun 1 thru Aug 31) Feels Like Temp (F) Hours At or Above 105F  
[PBI] WEST PALM BEACH:: (1991-2024)

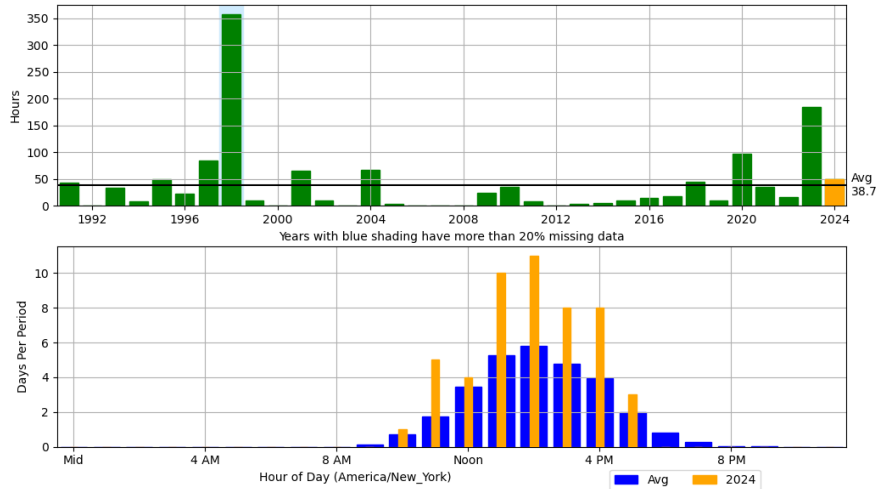


Generated at 3 Sep 2024 12:14 PM CDT in 2.75s

IEM Autoplot App #159



( Jun 1 thru Aug 31) Feels Like Temp (F) Hours At or Above 105F  
[FLL] Fort Lauderdale - Hollywood:: (1991-2024)

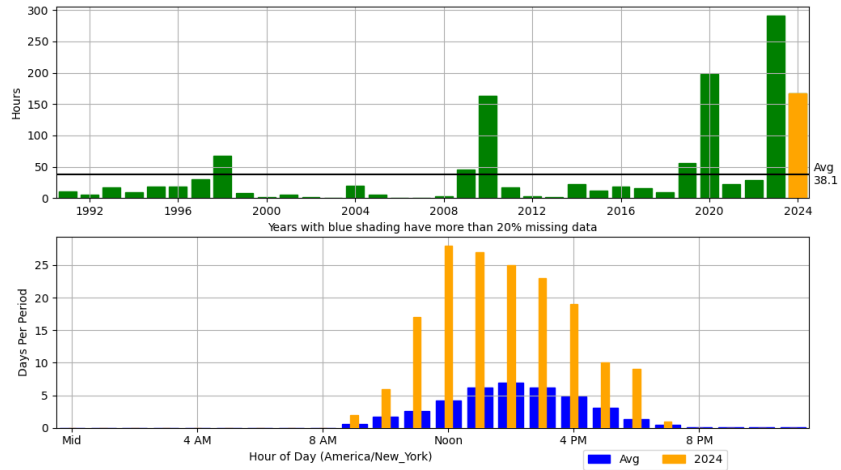


Generated at 3 Sep 2024 12:15 PM CDT in 2.62s

IEM Autoplot App #159



( Jun 1 thru Aug 31) Feels Like Temp (F) Hours At or Above 105F  
[TMB] MIAMI/KENDALL-TAMIA:: (1991-2024)

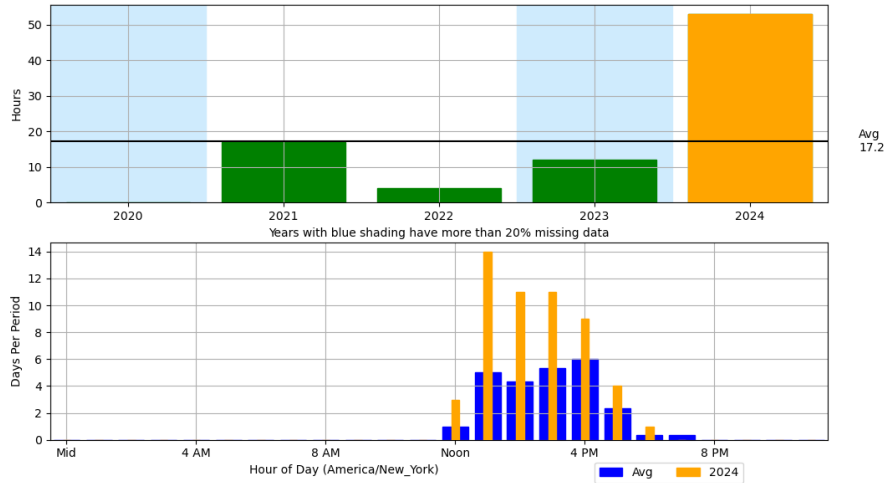


Generated at 3 Sep 2024 12:13 PM CDT in 1.82s

IEM Autoplot App #159



( Jun 1 thru Aug 31) Feels Like Temp (F) Hours At or Above 105F  
[2IS] Clewiston:: (2020-2024)

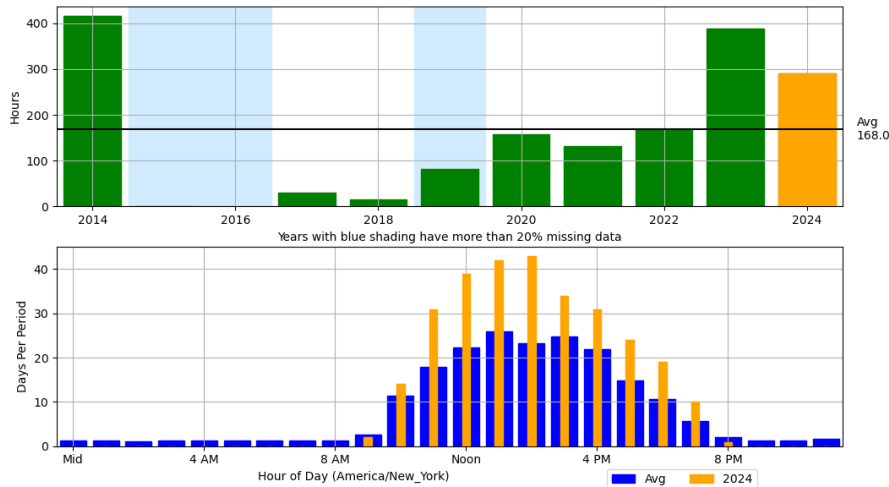


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IEM Autoplot App #159



( Jun 1 thru Aug 31) Feels Like Temp (F) Hours At or Above 105F  
[IMM] Immokalee Auxiliary:: (2014-2024)



Generated at 3 Sep 2024 12:16 PM CDT in 1.53s

IEM Autoplot App #159

Note: Naples Airport data not shown due to incomplete dew point data

## Fall 2024 Outlook (September to November)

Latest outlooks by the [NOAA Climate Prediction Center](#) (CPC, Figures 9 and 10) are indicating the likelihood (50-60%) of above normal temperatures, and leaning (40-50%) to above normal precipitation for the September to November period. This is the period in which South Florida transitions from the wet season to the dry season, with the rainy season ending on October 15<sup>th</sup>. Predicting this transition period well in advance is quite

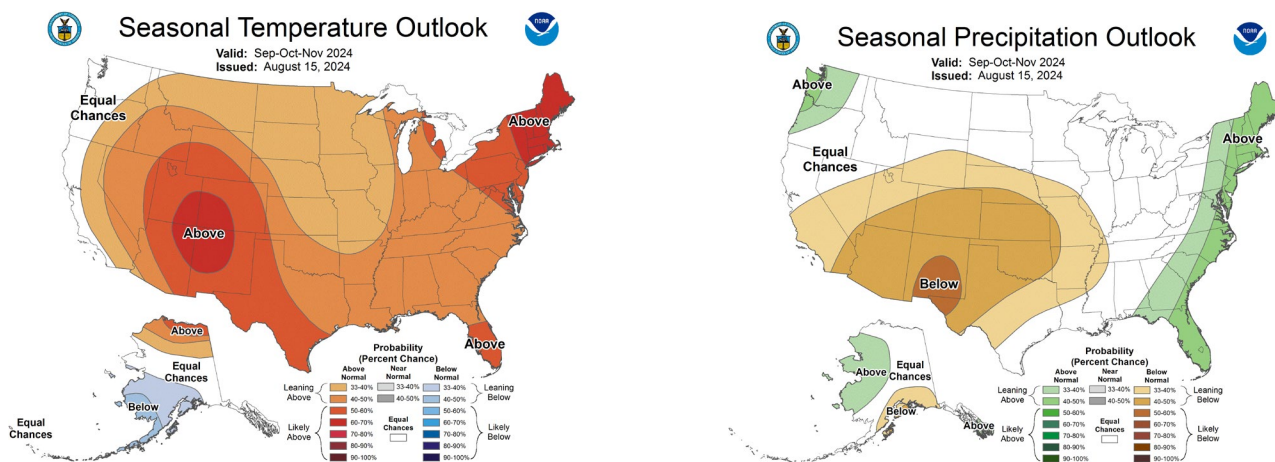


difficult, with some years experiencing a quick transition of only a few days while others going through a gradual transition spanning a few weeks. This transition period can be largely influenced by tropical systems during what is typically the most active part of hurricane season.

Those looking for relief from the summer-long heat and humidity typically have to wait until early or mid-October for the first noticeable cold front to bring cooler and less humid air into the region, with more substantial lowering of temperatures into the 50s not normally observed until late October or November. This means that summer-like heat and humidity often linger well into October. Those taking part in outdoor activities should stay hydrated and avoid prolonged exposure especially during the late morning through mid-afternoon time frame.

September and October represent the two most hurricane prone months for South Florida. Therefore, it is important that we continue to keep a close eye on the tropics and make sure that our personal hurricane plans are in place for this season.

For the latest south Florida weather information, including the latest watches, advisories and warnings, please visit the National Weather Service Miami Forecast Office's web site at [weather.gov/southflorida](https://www.weather.gov/southflorida).



**Figures 9 and 10:** September-November temperature probability (left) and precipitation probability (right) from NOAA's Climate Prediction Center (CPC).