



Messaging Impacts from Extreme Weather & Climate along the Northeastern Gulf Coast

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NOAA/NWS Tallahassee



NWS WFO Tallahassee

- Three States
- Two Time Zones
- Marine Interests
- State Liason Office for Florida
- Active during all 4 seasons



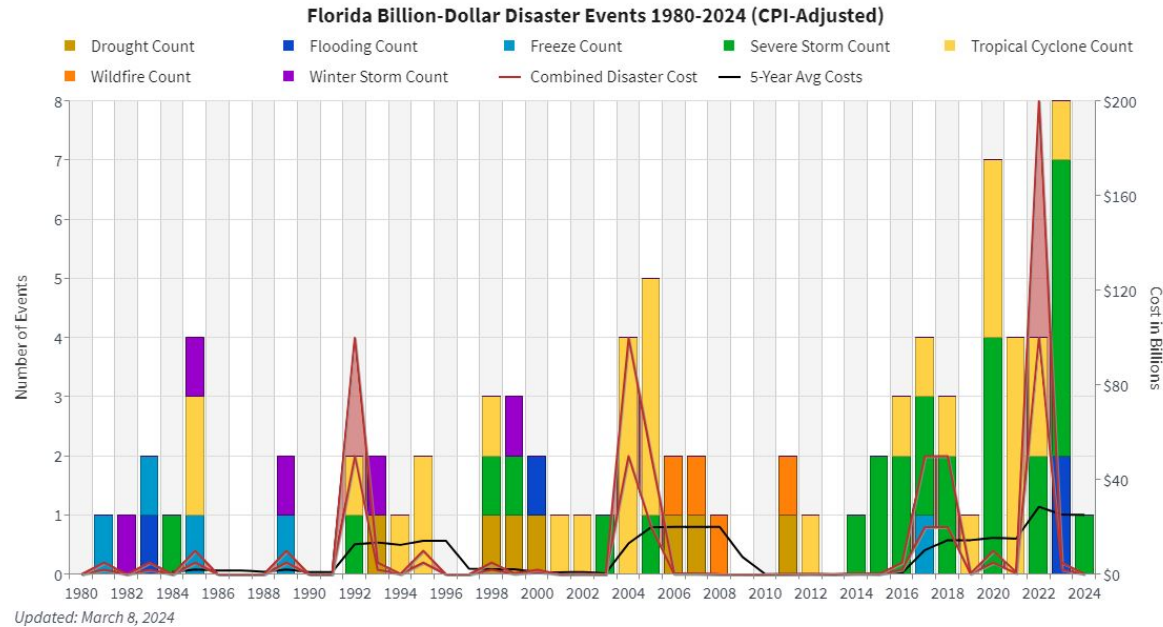


Outline

- Extreme Weather in the Florida Big Bend/SE AL/SW GA
- Impacts and Implications
- Communicating the Impacts



Impacts of Weather Disasters in Florida





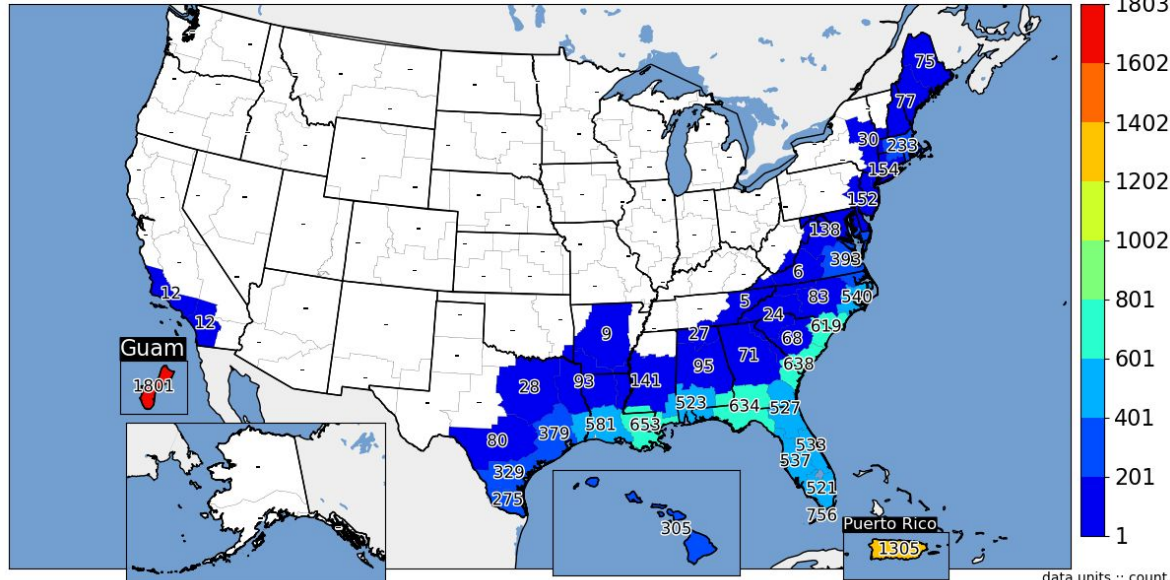
Hurricanes

- Northeast Gulf is no stranger to Tropical Cyclones
- TAE has issued the 3rd most Hurricane Local Statements of any CONUS office since 2001
- Intensity has been limited over the past 75-100 years



NWS Issuance Count of [HLS] Hurricane Local Statement

Plot valid between 01 Jan 2001 00:00 UTC and 25 Mar 2024 17:27 UTC, based on unofficial IEM Archives



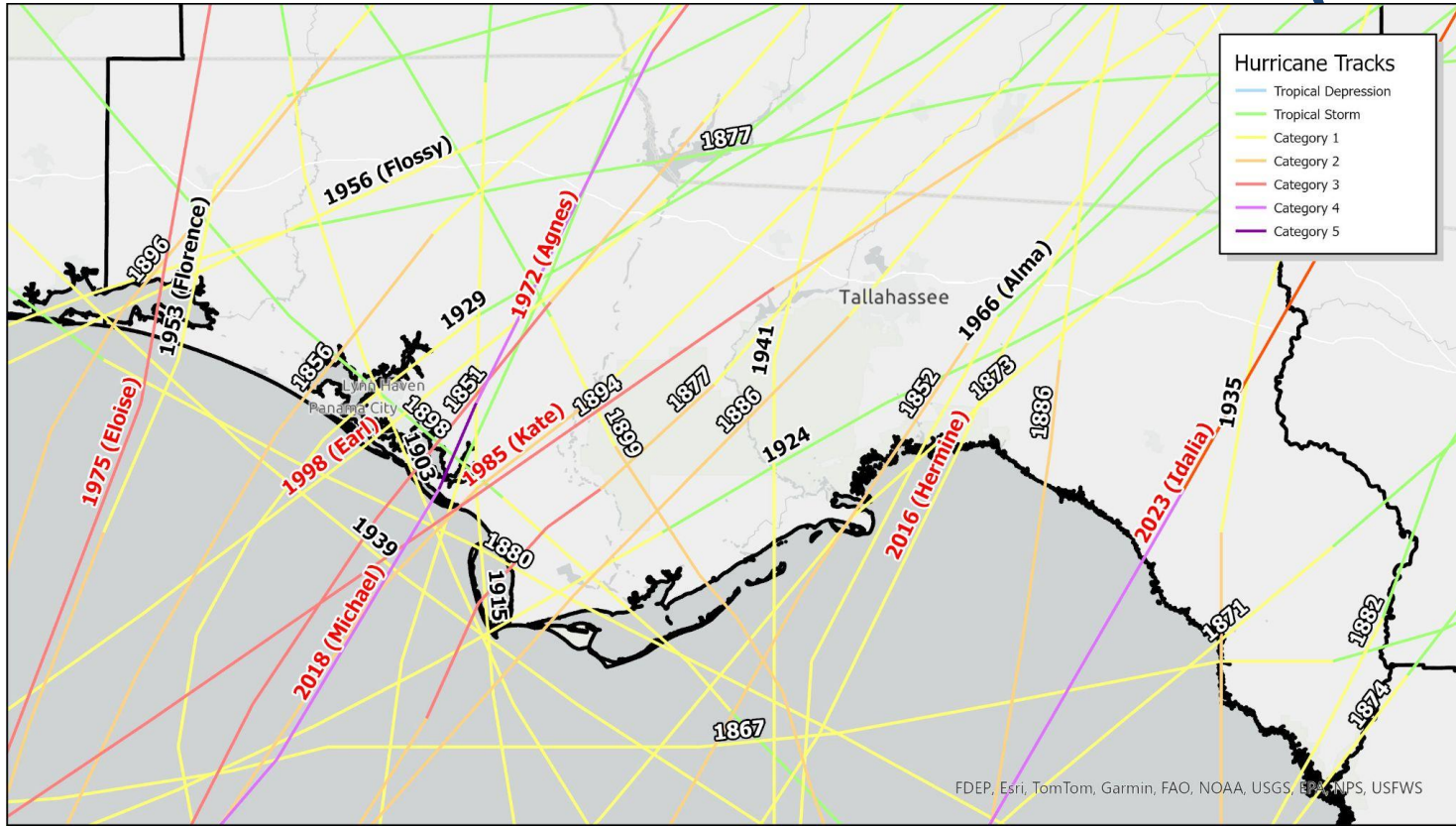
Generated at 25 Mar 2024 12:27 PM CDT in 6.62s

Source: Iowa State University

data units :: count
IEM Autoplot App #210



Tallahassee CWA Hurricane Landfalls (ALL)



Pre-1900

1900-1970

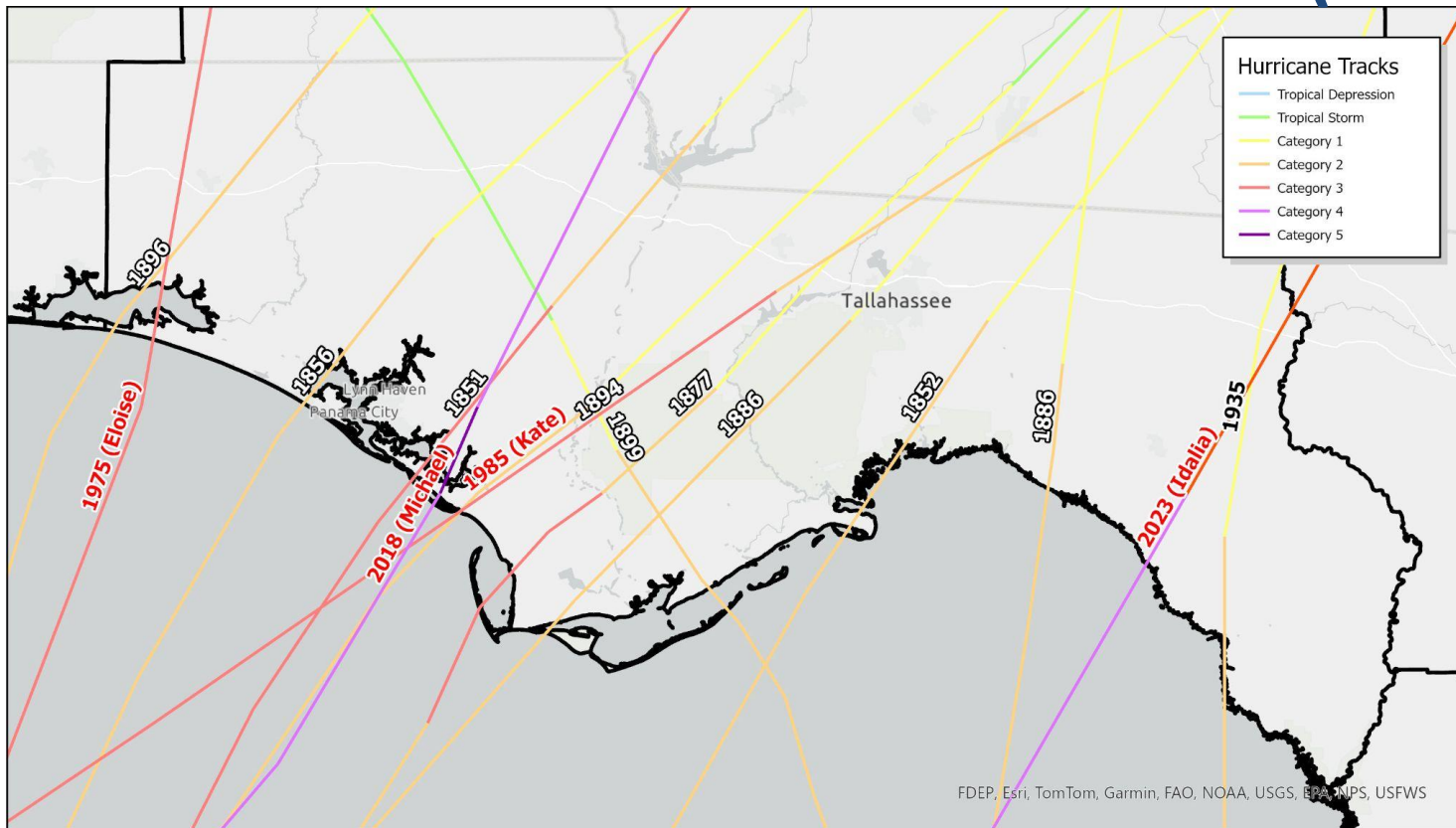
Post-1970

NOAA HURDAT,
Preliminary Best
Track

FDEP, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, MFS, USFWS



Tallahassee CWA Hurricane Landfalls (Cat 2+)



Pre-1900

1900-1970

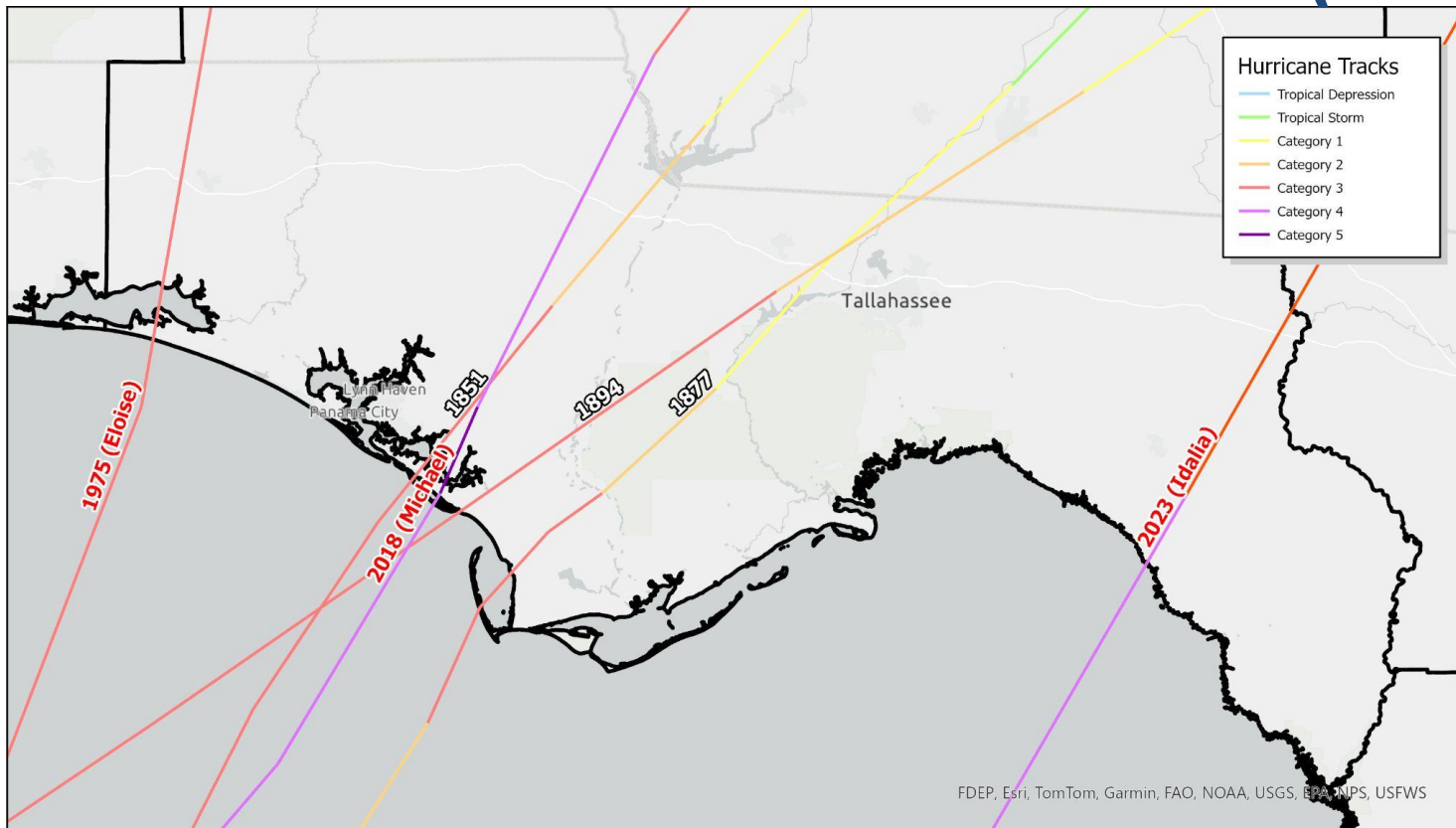
Post-1970

NOAA HURDAT,
Preliminary Best
Track

FDEP, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS



Tallahassee CWA Hurricane Landfalls (Cat 3+)



Pre-1900

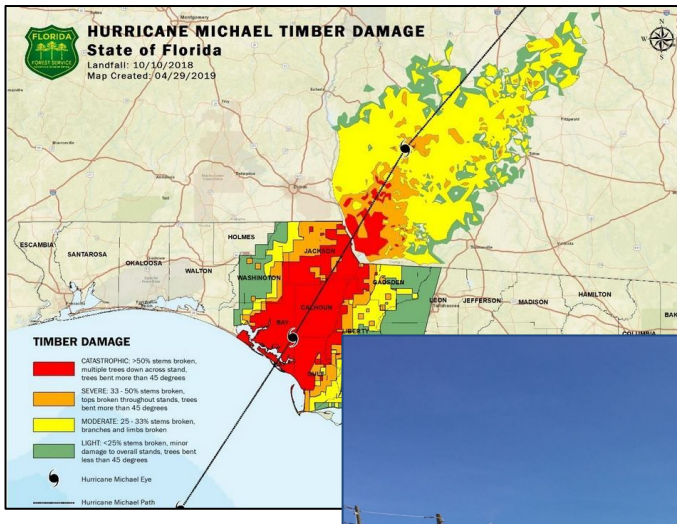
1900-1970

Post-1970

NOAA HURDAT,
Preliminary Best
Track

Michael Impacts

- Category 5 Landall (~160mph)
- 9-14 foot Storm Surge
- Severe structural damage from coastal areas of eastern Panhandle into SW Georgia
- Extensive crop and timber damage
- \$30.5B estimated cost



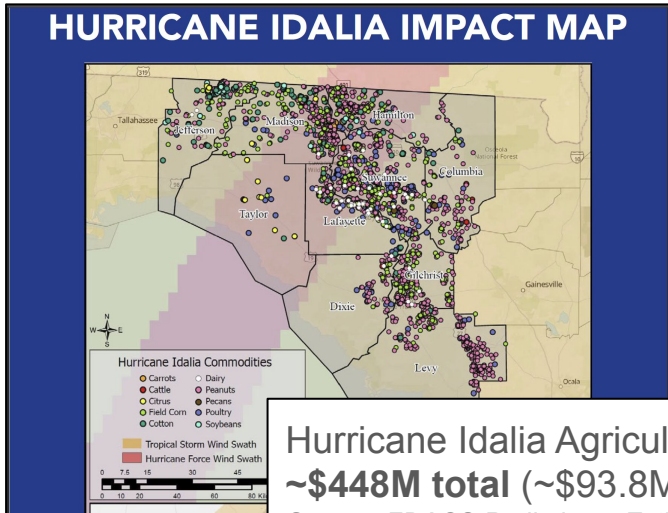
Hurricane Michael Agricultural Losses:
~\$1.5B total (~\$1.3B in timber)
fodder for long-term wildfire risk

Source: FDACS/Southeast AgNet - Nov 2018

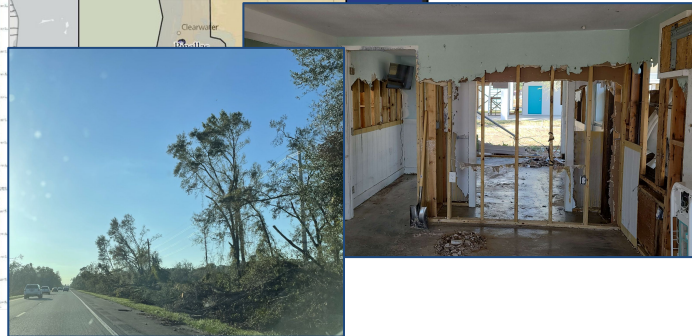
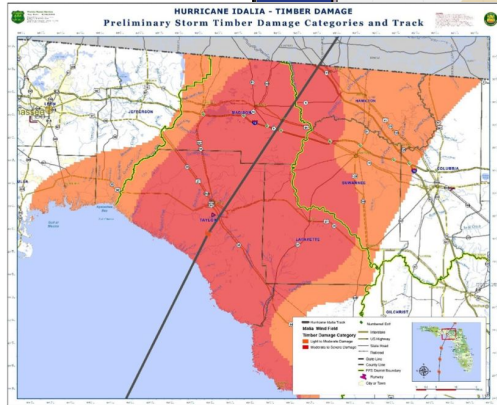


Idalia Impacts

- Category 3 Landall (~125mph)
- 7-12 foot Storm Surge
- Extensive crop and timber damage through Big Bend into South Central Georgia
- \$3.5B estimated cost



Hurricane Idalia Agricultural Losses:
~\$448M total (~\$93.8M in field crops)
Source: FDACS Preliminary Estimates of Damage to Florida Agriculture from Hurricane Idalia - Sep 2023









Messaging Extreme Events

Unprecedented Event Unfolding Weather Forecast Office Tallahassee
Issued October 10, 2018 1:06 AM ET

We searched the historical database for category 4 hurricanes that have made landfall in the Florida Panhandle and Big Bend. This map says it all – it's **BLANK** – this situation has **NEVER** happened before.



This is your **LAST** chance to get to a safe place and the time for that is closing. This storm will bring deadly surge to the Florida Panhandle and Big Bend coast and is not comparable to anything we have seen before. **If you have been told to evacuate, LEAVE.** Do not stay and risk your life or that of your family.

   NWSTallahassee weather.gov/tallahassee

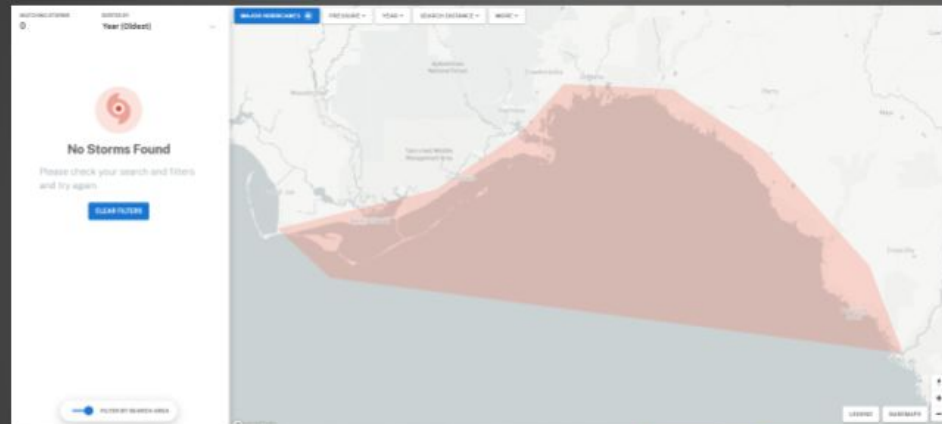


Messaging Extreme Events

Unprecedented Event Unfolding

Weather Forecast Office
Tallahassee, FL

Issued August 29, 2023 11:00 AM ET



If you wanted to know
how many major
hurricanes have ever
entered Apalachee
Bay, the answer is...

0

A major hurricane (Category 3+) has **NEVER** entered Apalachee Bay in recorded history. This is your **LAST DAY** to get prepared. Preparations need to be rushed to completion by sunset. If ordered to evacuate, **LEAVE**. Conditions rapidly deteriorate tonight.

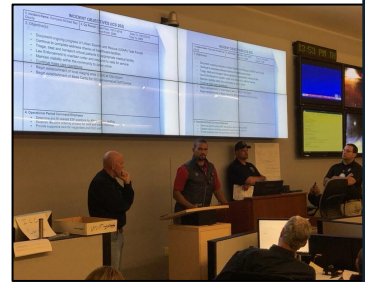
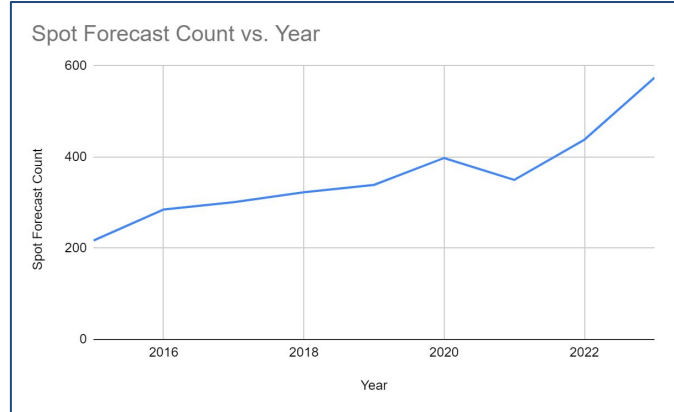
NWSTallahassee

weather.gov/tallahassee



Since Michael

- Increased Fire Weather support
 - Spot Forecasts Increasing
 - Wildfire Support (Chipola Complex [2022])
- Enhanced support to state and county partners
 - In-person Deployments
 - Virtual Deployments (Pods)
 - Support Multiple Counties at once
- Outreach and Education
 - Higher demand





Heat

- 2023: Anomalously hot/humid summer for TAE

890
SXUS72 KTAE 011346
RERTLH

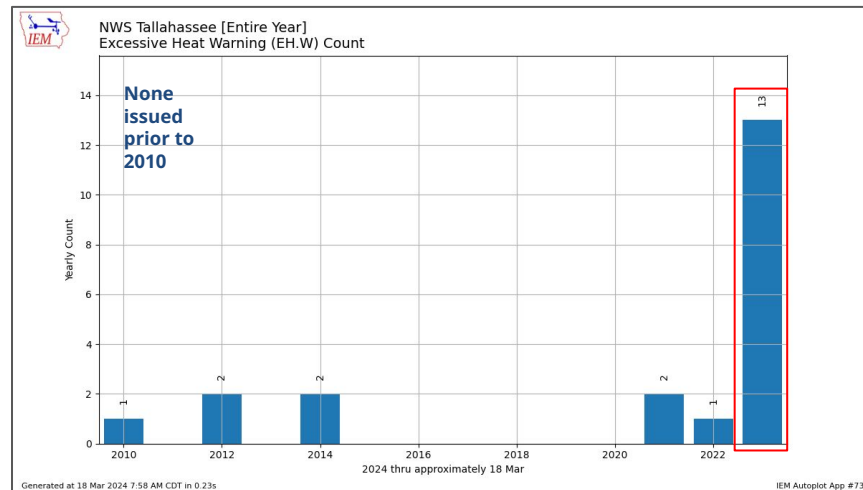
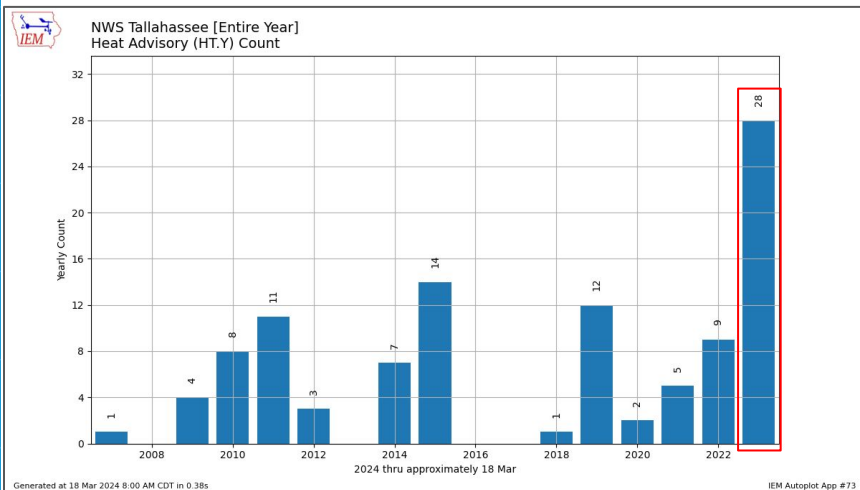
RECORD EVENT REPORT
NATIONAL WEATHER SERVICE TALLAHASSEE FL
0942 AM EDT FRI SEP 01 2023

...WARMEST MONTH ON RECORD SET AT TALLAHASSEE...

AUGUST 2023 WAS THE WARMEST MONTH ON RECORD AT TALLAHASSEE. THE AVERAGE TEMPERATURE WAS 86.4 DEGREES F. THIS SURPASSED THE OLD RECORD OF 85.5 DEGREES F THAT OCCURRED IN JULY OF 1932.

Heat Advisory:
Heat Index 108-112°

Excessive Heat Warning:
Heat Index >112°

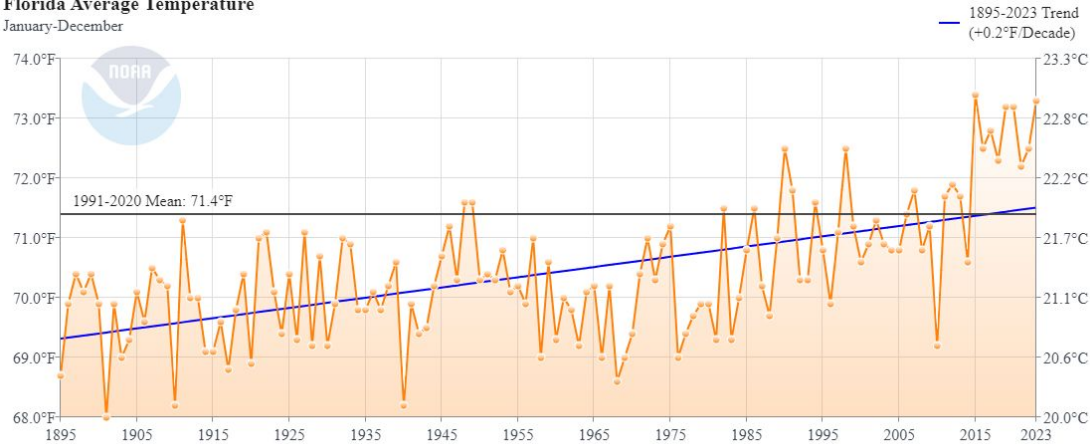




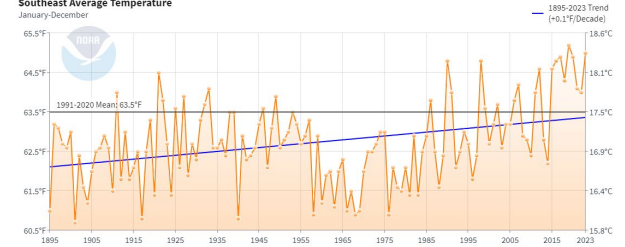
Heat

- Yes, it's Florida, but...

Florida Average Temperature
January-December



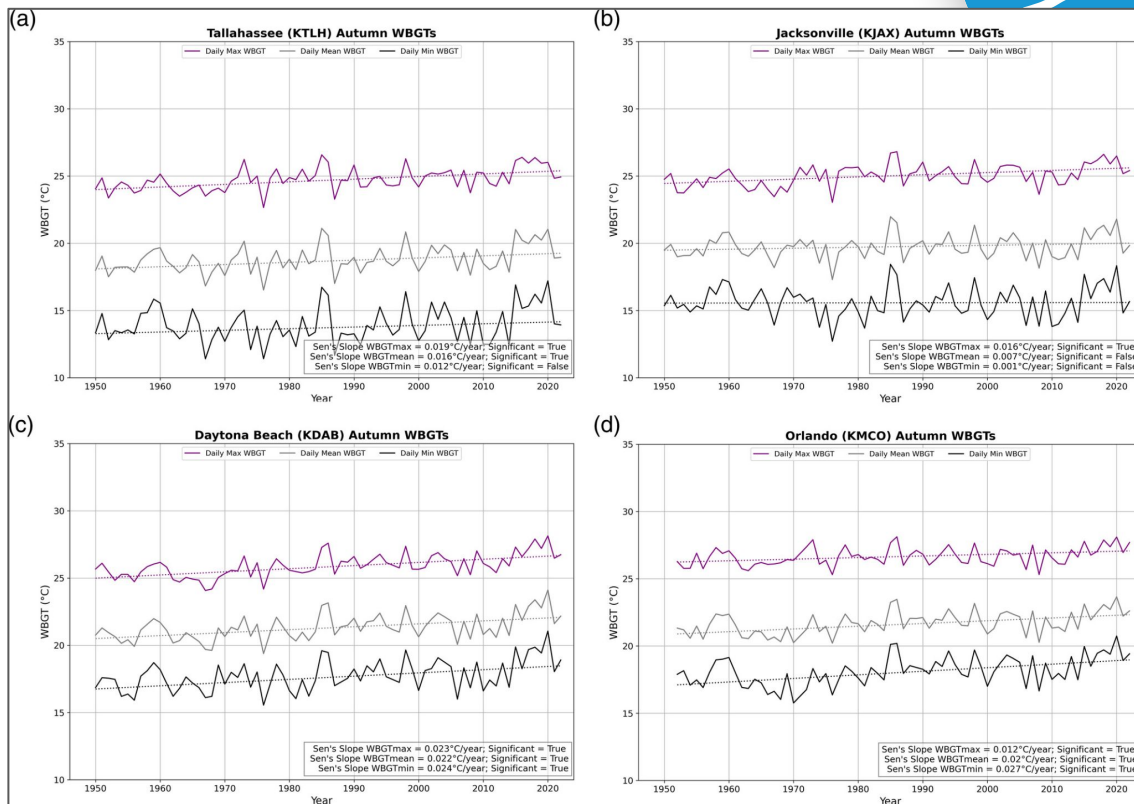
Southeast Average Temperature
January-December



Source: [NCEI Climate at a Glance](#)

Heat

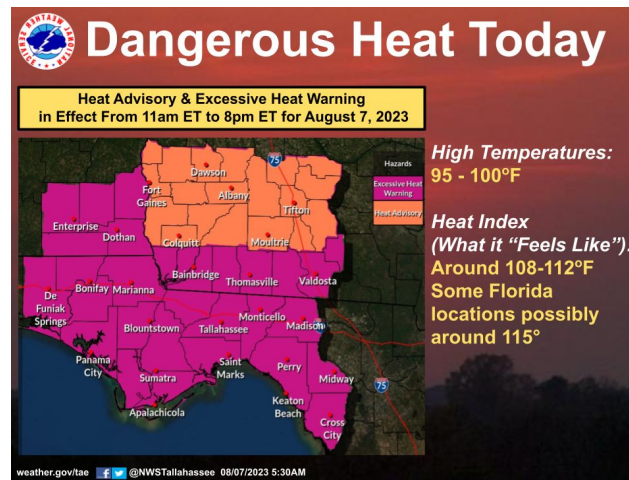
- Heat Indices and Wet Bulb Globe Temperatures (WBGT) on the rise in Florida (Ennis and Milrad, 2024)
- Autumn shown here (Ennis and Milrad, 2024)
- Summer (McAllister et al, 2022)



Intl Journal of Climatology, First Published: 04 March 2024, DOI: (10.1002/joc. 8415)

Heat Messaging

- Increasing Messaging to partners
 - Heat-related briefing packets
 - Conference calls
- Transition away from Heat Index
 - Heat Risk
 - Wet Bulb Globe Temperature
- Increase Partner and Public Education
 - Heat is dangerous even in Florida
 - Partner training on Heat Risk



Heat can escalate quickly.

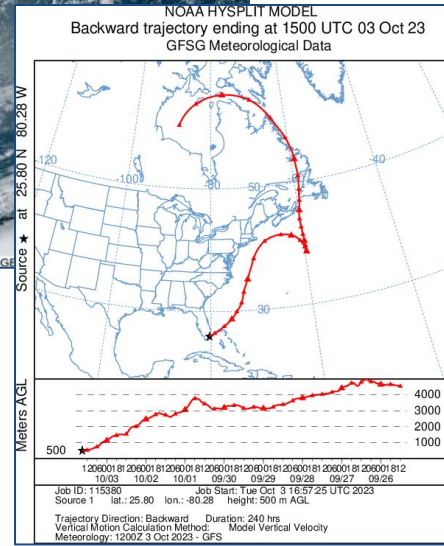
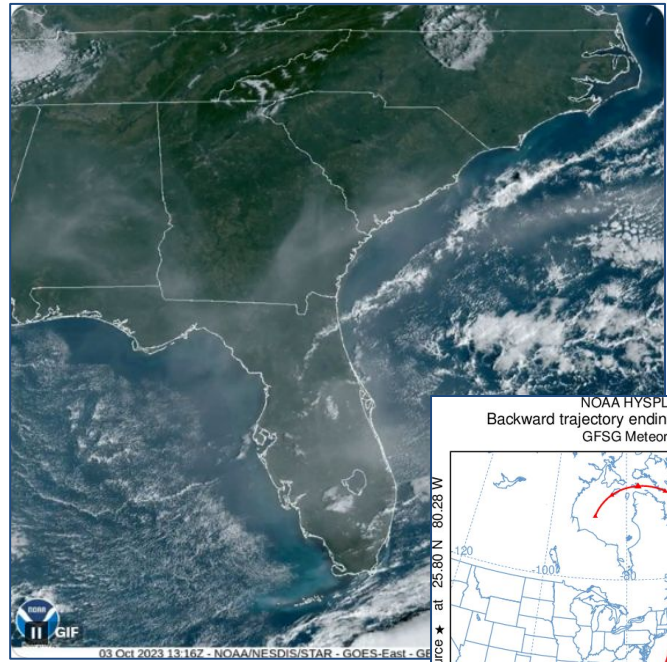
Warm temperatures can quickly become dangerous. Heat is one of the most deadly weather hazards — don't underestimate it.

- ⚠️ NEVER leave people or pets alone in a closed car
- 💧 Drink plenty of water, even if you don't feel thirsty
- 👕 Wear loose-fitting, light-colored clothing
- ❄️ Spend time in air conditioning and in the shade



Air Quality

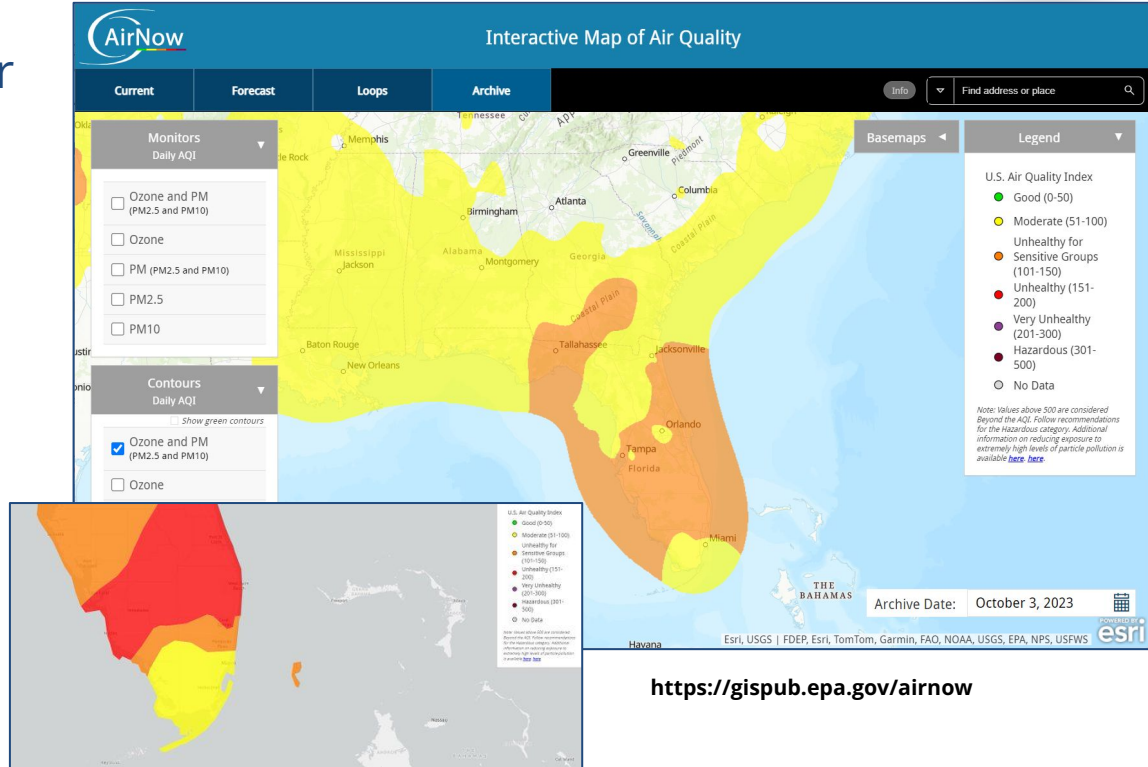
- Northeast Gulf not typically know for air widespread air quality issues
- Ridge of high pressure + Canadian wildfires brought significant smoke to much of the Deep South in October 2023





Air Quality

- Significant Impacts to air quality across the state
- Prompted impromptu coordination between NWS and State Florida Department of Environment Protection (FDEP)





Air Quality Messaging

- WFO Tallahassee (as state liaison office) now leading coordination effort with FDEP
- Collaborating statewide Air Quality program between all Florida NWS Offices and FDEP
- Goal to provide consistent service

airnow.gov' followed by hashtags #FLwx #ALwx #GAwx. Below the text is a weather map titled 'Today High Temperature and Chance of Precipitation' for Tallahassee, FL, issued Oct 04, 2023 3:13 AM EDT. The map shows a 'HAZY' overlay and a color scale for 'Chance of Precipitation (%)' ranging from 15% (green) to 100% (red). Various cities and their temperatures are labeled on the map, including Tallahassee (87°), Gainesville (89°), and Orlando (86°)."/>

NWS Tallahassee
@NWSTallahassee

Hazy conditions, mostly from Canadian wildfire smoke, will continue this afternoon. Until later this morning, when things begin to mix out, air quality could be bothersome to some folks. You can get the latest air quality reports from: airnow.gov

#FLwx #ALwx #GAwx

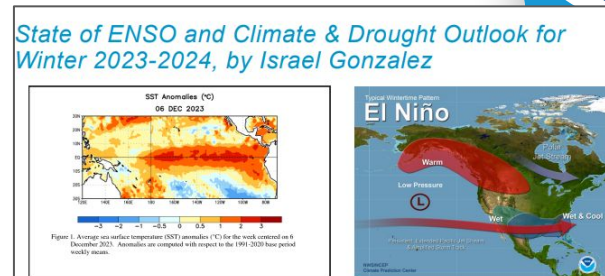
Today
High Temperature and Chance of Precipitation
HAZY
Weather Forecast Office
Tallahassee, FL
Issued Oct 04, 2023 3:13 AM EDT

7:30 AM · Oct 4, 2023 · 2,619 Views

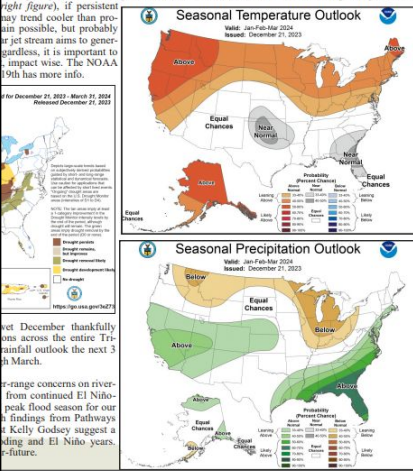
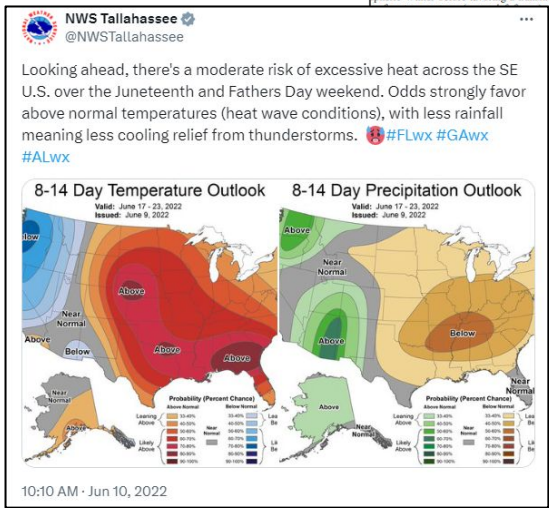
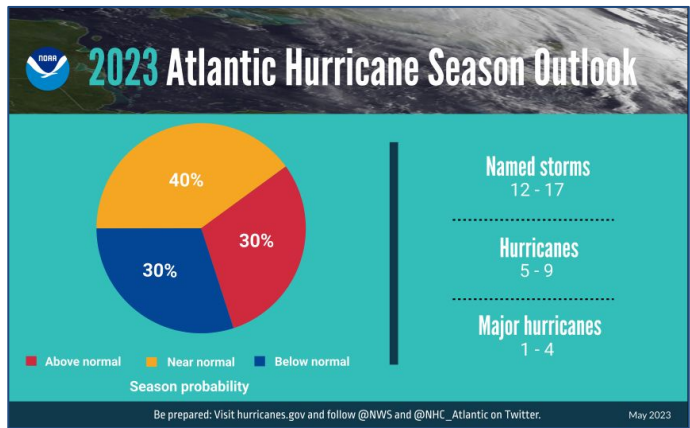


Other Messaging

- Seasonal/Sub-seasonal Outlooks
- Drought Monitor
- Hurricane Seasonal Outlooks
 - Used carefully to direct attention to preparation



Wet End to 2023 Spills into 2024: An [El Niño Advisory](#) continues with current conditions poised to persist through the Northern Hemisphere Winter before favoring a transition to ENSO-neutral during April-June 2024 at 60%. As of early December, above-average sea surface temperatures across the Equatorial Pacific were indicative of an ongoing El Niño despite abated growth anomaly likelihood of a wet winter (bottom-right figure) across the Southeastern US thanks to a typical winter pattern that prompts storm development & tracks across the Northern Gulf. Although temperatures are still above normal, if persistent dry conditions persist, they may trend cooler than normal in the future.





Contact Info



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   NWSTallahassee

<https://weather.gov/tae>