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Tallahassee *topics*

NEWS AND NOTES FROM YOUR LOCAL NATIONAL WEATHER SERVICE OFFICE.

The National Weather Service (NWS) office in Tallahassee, FL provides weather, hydrologic, and climate forecasts and warnings for Southeast Alabama, Southwest & South Central Georgia, the Florida Panhandle and Big Bend, and the adjacent Gulf of Mexico coastal waters. Our primary mission is the protection of life and property and the enhancement of the local economy.

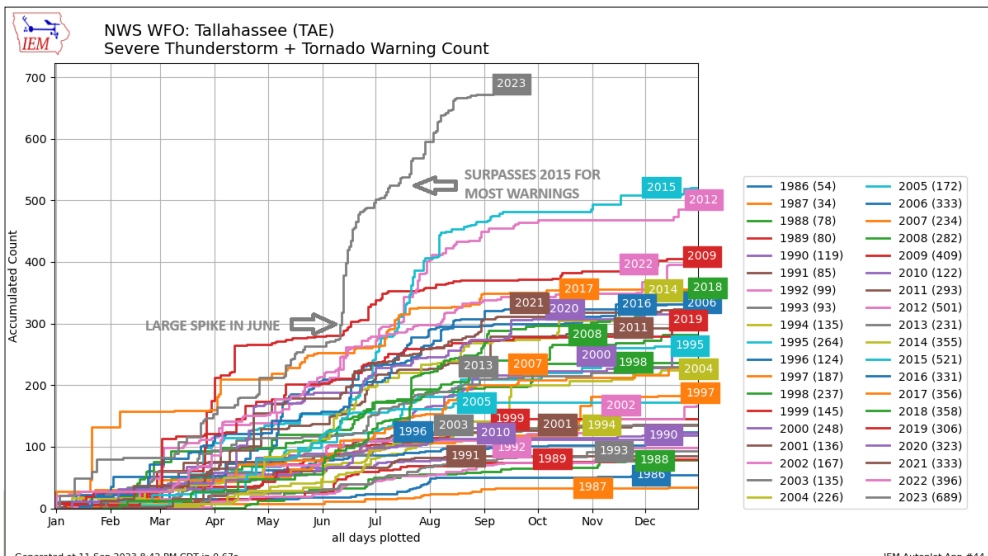
A Summer for the Record Books By Don Van Dyke (DVD)

Summer 2023 will go down in the record books for its highly unusual severe weather activity and anomalous heat. Convectively, June stands out the most as there were a total of 276 documented non-marine wind reports, including measured wind gusts of 75 mph at an Ambient Station near Lake Marin, FL in Bay County, as well as the St George Island Bridge WeatherSTEM. Both reports occurred on the 16th. The previous record number (dating back to 1955) of wind reports for June was 227 set in 2015, with the highest measured gust for June of 77 mph at the Southwest GA Regional Airport in Albany on the 9th. Fifteen tornadoes were confirmed, including an EF-2 in Early County on the 14th. The previous record number (dating back to 1950) of June tornadoes was 13 set in 1989, and were all apparently non-tropical related! For hail, we had 24 reports, including 4" from Doerun, GA in Colquitt County on the 14th. The previous record number of June hail reports was 15 set in 2011, while the old record for largest hailstone diameter was 2.75" on June 10, 1995 (Woodville, FL) and June 18, 2009 (Perry, FL). Records go back to 1955.



Overall, 428 local storm reports (LSRs) were sent, more than double the next highest number from 2012 at 178! Here is the June 2023 tally of convective warnings: 182 Severe Thunderstorm, 44 Tornado, 27 Flash Flood. All those warnings were the most issued in our office's history, dating back to 1983! There was a relatively steady decline of warnings issued from July through August, but still an elevated amount, though none were tornadoes.

The 76 Severe Thunderstorm Warnings and 264 LSRs both set new office records for the month of August. We already eclipsed our now formerly highest annual warning count by early July (*bottom-right figure!*)



Looking at heat products, a total of 28 Heat Advisories for 108°-112° heat indices (16 in August) were issued between June 1st and August 31st, doubling the next highest number from 2015! Thirteen Excessive Heat Warnings for 113° or greater heat indices (11 in August) were issued during that same timespan. To put into perspective, only 10 have ever been previously issued by our office through July 2023! Overall, this past August accounted for about 66% of all our heat products.

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Summer Highlights *By Israel Gonzalez & DVD*

Relentless June Severe Weather: June was a wild month across the forecast area for severe storms. We issued 181 Severe Thunderstorm Warnings, 44 Tornado Warnings, 27 Flash Flood Warnings, and 109 Special Marine Warnings. We documented 253 reports of wind damage, 30 measured gusts of 58 mph or greater, 11 tornadoes with damage, 38 reports of flash flooding, 35 measured gusts of 34 knots or greater along the coast for the marine areas, and 3 reports of water-spouts. The above-average amount of severe weather for June was caused by above-average wind shear combined with above-average instability. The former seemed to stem from an enhanced sub-tropical jet in response to a rapidly developing El Niño over the Eastern Equatorial Pacific.

Very Hot & Stormy July: July was notable for its abnormal warmth mixed in with multiple bouts of severe weather. The latter was especially pronounced late month when scattered clusters of organized thunderstorms impacted the Tri-State area. There were numerous reports of downed trees and powerlines from strong/damaging wind gusts on the 22nd, which helped to verify many of the nearly 2 dozen convective warnings issued that day. Southwest GA was particularly hit hard. An additional 20 warnings were issued on the afternoon/evening of the 30th in response to scattered severe storms moving NW to SE in addition to the seabreeze and subsequent outflow boundary collisions. This activity also coincided with dangerous heat conditions. A total of 10 Heat Advisories and 2 Excessive Heat Warnings were issued this July.

Hottest Month on Record + Idalia: August will be remembered for its unprecedented heat, bouts of severe weather, and Hurricane Idalia. A total of 11 Excessive Heat Warnings were issued to account for strong, long-duration heat waves that affected the Tri-State Area and much of the US. The mean temperature of 86.4° at the TLH Airport surpassed July 1932 as the [hottest month on record](#) by nearly a full degree! Severe weather was most focused in the first half of the month with 4 days of at least 10 warnings issued. Major Hurricane Idalia closed out the month by making landfall near Keaton Beach on the morning of the 30th. A more detailed article on [Idalia's local impacts](#) is in the next page.

Tallahassee Climate Summary

June-August 2023

	Actual	Normal
Average temp	84°	81.9°
Highest temp	102°	99°
Warmest low	80°	78°
Total rainfall	17.26"	22.5"
100° days	7	3
95° days	51	28

Autumn Normals
69.8° 11.55"



National Weather Service Tallahassee

Climate "Summer"-y: This past June-August was one of the hottest summers on record for Tallahassee with a mean average temperature of 84°, just under a half-degree off 1st-place 2011, and tied with 2015 for 3rd place. There were a total of seven 100 days (tied for 6th most on record) and fifty-one 95° days (3rd most on record). The highest max temperature was 102° on August 25th, while the warmest min temperature was 80° on June 27th. The latter is 1° off tying the all-time warmest low, set back on July 15, 1980. Tallahassee has only reached or exceeded the 80° min temperature calendar day mark only a handful of other times.

For precipitation, only 17.26" fell, which is over 5" below normal; likely attributed to an unusual number of occasions when the prevailing low-to-mid-level flow out of the north to NW kept the seabreeze pinned closer to the coast. Strong ridging was also a contributing factor as a convective suppressor. Tallahassee was poised to be even drier had it not been for the 2.21" of rain that fell on August 30th, courtesy of Hurricane Idalia.

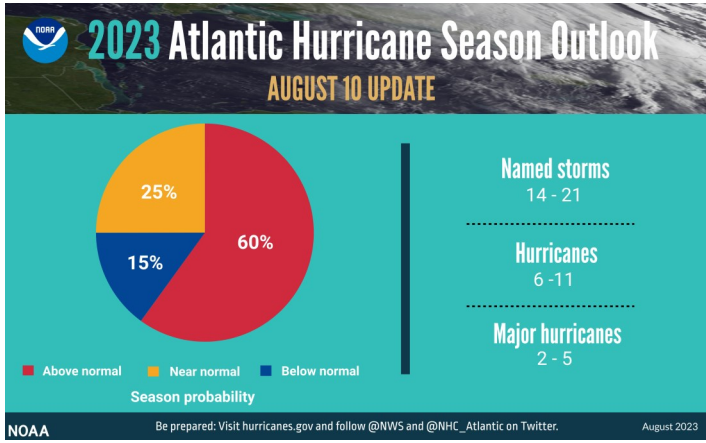
Hurricane Mid-Season Review

By Israel Gonzalez

IS THERE A TOPIC YOU'D LIKE US TO COVER? SEND US AN E-MAIL:

israel.gonzalez@noaa.gov

mark.wool@noaa.gov



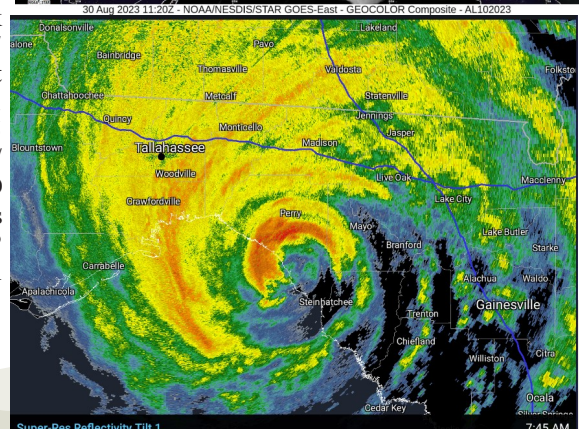
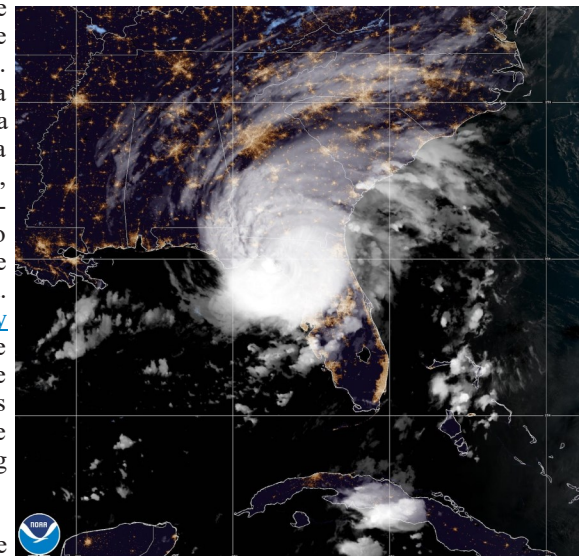
Since the official start of the 2023 Atlantic Hurricane Season on June 1st, the basin has seen 14 named storms, 6 hurricanes, of which 3 became major. Don became the first hurricane of the season over the North Atlantic in late July, while Franklin became the 1st major hurricane of the season in late August south of Bermuda with a peak strength of high-end category 4! Tropical Storm Harold was the first system to make US landfall this season in SE TX on August 23rd.

Major Hurricane Idalia (2nd of the season) was the first hurricane in recorded history to achieve at least category-3 strength over Apalachee Bay and made landfall near Keaton Beach, FL with max sustained winds of 125 mph on August 30th. Lee was the next hurricane to form on September 6th and underwent a very pronounced period of rapid intensification to category-5 strength north of the Virgin Islands. Lee eventually made landfall in Nova Scotia as a powerful post-tropical cyclone. The latest 2 systems to achieve hurricane status were Margot (September 11th) and Nigel (September 18th).

To date, this season's activity is already nearing the 30-year (1991-2020) climatological mean with still another 2 full months to go. Extremely warm sea-surface temperatures combined with an invigorated West-African monsoon have helped offset the often negative tele-connection impacts from a pronounced El Niño. Climate Scientists of NOAA have recognized these patterns and as such, [adjusted their outlook](#) on August 10th for the remainder of the season. The newest projections (*figure above*) have shifted substantially in favor of an above-normal season at 60%, with odds of a near-normal season decreasing from 40% to 25%. This update now calls for 14-21 named storms, 6-11 hurricanes, 2-5 major hurricanes. The current tally is already at the lower bounds of these ranges.

Hurricane Idalia Impacts the FL Big Bend & South-Central GA: Hurricane Idalia made landfall (*pictured to the right*) on the morning of August 30th along the coast of Taylor County Florida near Keaton Beach at approximately 745 am EDT. The hurricane made landfall with estimated sustained winds of 125 mph, making it a Category 3 hurricane on the Saffir-Simpson Hurricane Wind Scale. Hurricane Idalia moved inland across the eastern Florida Big Bend and into South Central Georgia during the morning hours. Strong winds caused extensive damage to trees, buildings, and infrastructure along a broad swath stretching west to Tallahassee and east beyond the Suwannee River. Significant storm surge accompanied the hurricane into the Taylor and Dixie County coasts, where water levels reached at least 8 feet above ground level (i.e., Steinhatchee River US-19) and pushed up to 1.5 miles inland. Peak surge values along the immediate coast ranged from [7-12 ft above normally dry ground](#) in spite of low tide. Significant damage to property and infrastructure was associated with the storm surge. A total of 7 injuries and 1 direct fatality were reported and all occurred in Lowndes County, GA. Additionally, over 1000 homes were damaged with nearly 700 being destroyed or receiving major damage. There were numerous road closures, including 2 locations on I-75. Widespread flooding also occurred.

Tallahassee avoided the worst conditions, but still experienced tropical storm-force winds that led to scattered power outages (24% of Leon County residents). The peak wind gust at the TLH Airport was 46 mph, while the VLD Airport maxed out at 67 mph before the sensor failed! The highest land sustained wind was 63 mph at Horseshoe Beach, with Lafayette High School reporting the highest gust of 75 mph. The West Tampa Buoy (42036) reported the highest marine sustained wind of 55 mph, with Keaton Beach gusting to 72 mph. A few reliable stations in the Valdosta/Southern Lowndes County area reported rainfall in excess of 7". The 7.04" for VLD is the 3rd wettest day ever observed. One of the lowest minimum sea-level pressures (MSLP) measured was 979.7 mb at Moody AFB, which is the 2nd lowest MSLP measured at that site on record; trailing only 975.1 mb from the March 13, 1993! A deployed tower near Perry, FL reported 959 mb.





Summer Outreach Efforts

By Mark Wool

On June 1st, the first official day of the Atlantic Hurricane Season, WCM Mark Wool participated in the annual press conference at the Leon County Public Safety Complex. Mark joined city and county officials in helping to spread the word on how to be prepared for hurricane season. That evening, Mark gave a hurricane preparedness talk to the Tallahassee Amateur Radio Society. The next day, Mark discussed hurricane preparedness with Leon County Healthcare workers. Mark delivered similar briefings to the Big Bend Healthcare Coalition on the 6th, FSU on the 7th, Gadsden County on the 15th and the Apalachee LEPC on the 27th. City of Tallahassee residents were briefed on the upcoming hurricane season on the 6th, 13th and 19th at various venues as part of the City of Tallahassee neighborhood PREP (Planning for Readiness and Emergency Preparedness) events.

Outreach opportunities typically drop off during July and August. However, Mark did attend the Lifelong Learning Extravaganza Preview Event on August 15th, organized by the Leon County Senior Center. On this evening, seniors from around the county enjoyed cocktails and hors d'oeuvres while meeting with various organizations that were offering tours of their facilities during the month of September so that each participant could select which tours they wanted to register for. NWS Tallahassee will be hosting a group of 24 seniors on September 13th.

Management-Admin Team

Felecia Bowser, MIC
Mark Wool, WCM
Parks Camp, SOO
Doug Sherrick, ESA
Jennifer Nichols, ASA
Brian Coats, ITO
Kelly Godsey, Hydrologist
Ricardo Humphreys, OPL

Lead Forecasters

Don Van Dyke
Blair Scholl
Andy Haner
Karleisa Rogacheski
Molly Merrifield

Forecasters

Lance Franck
Wright Dobbs
Eric Bunker
Israel Gonzalez
Kristian Oliver
Jasmine Montgomery
Cameron Young
Joe Worster
David Reese

Pathways Interns

Sophie Bignault, Robert Szot,
Nico Porcelli

Electronic Technicians

Aaron Basti
Vacant

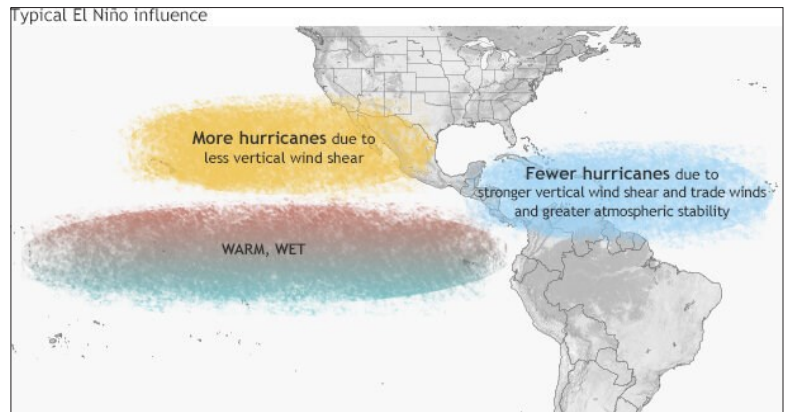
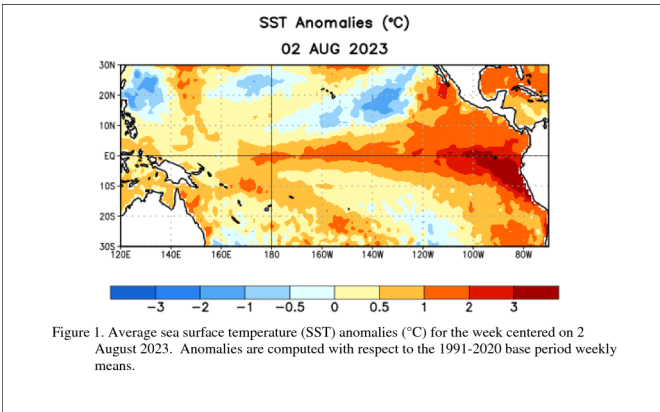


Staffing Update by Israel Gonzalez

The main update to our staffing is bringing aboard two Pathways Student Interns while enrolled at FSU for the Fall 2023 semester. Their names are Robert Szot of NWS Albuquerque, NM (*pictured bottom left*) and Nico Porcelli of NWS Louisville, KY (*pictured bottom right*). Both have a keen interest in operational meteorology and aim to further hone their skills of hopefully getting converted to a permanent position with the NWS. Robert hails from the Dallas, TX area while Nico is a South FL native. We look forward to working with them to help achieve their goals as they pursue a degree in meteorology. Additionally, our FSU Student Volunteer Program has resumed for the fall term and we'll continue to work with 7 students periodically through the end of 2023 led by the program leaders, Kelly Godsey and Eric Bunker. The students' names are: Alejandra Garcia, Chase Purdy, Christopher Glover, Melody Geiger, Summer Trolli, Alice Brennan, and Anna Walker. On the TAE meteorologist side, David Reese, our newest forecaster's first day in operations is September 26th.

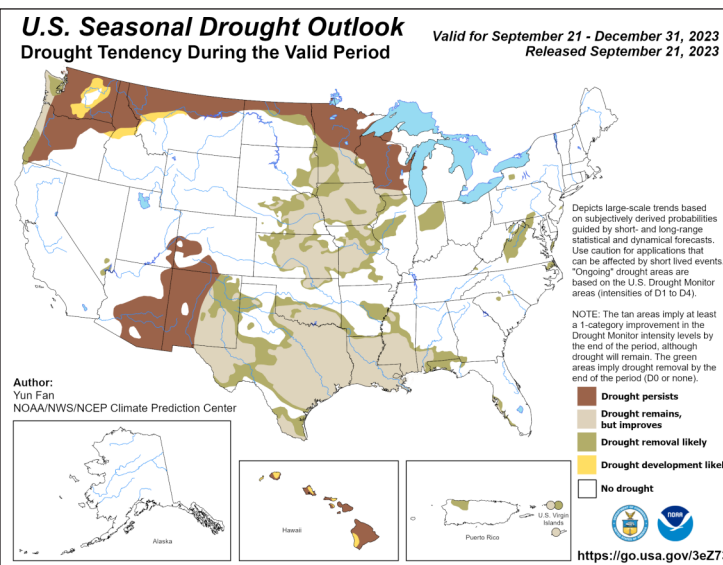
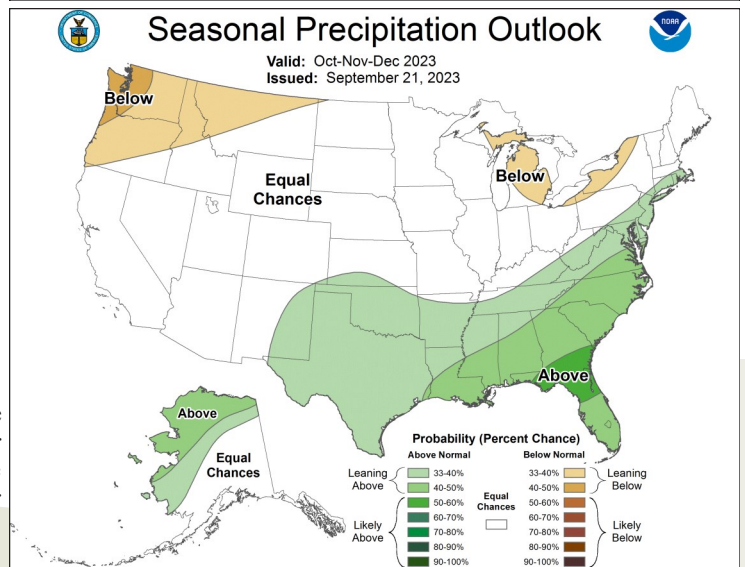
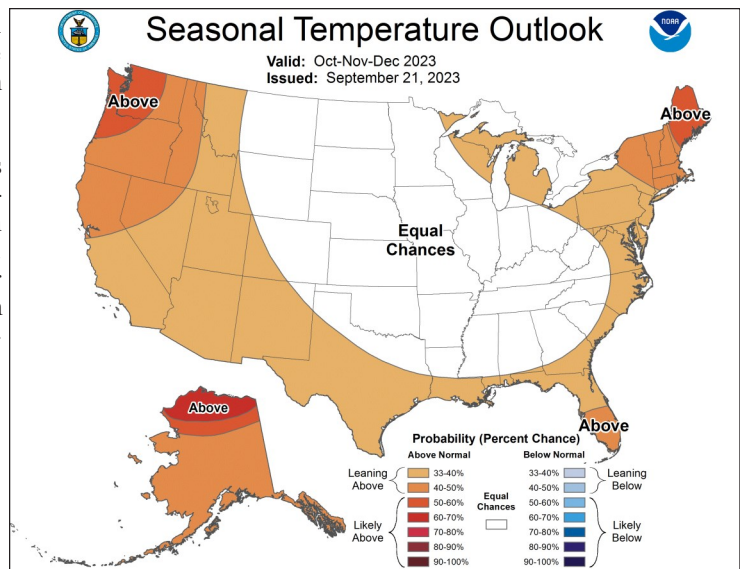


State of ENSO and Climate & Drought Outlook for Autumn 2023, by Israel Gonzalez



El Niño continues: El Niño, the warm phase of the El Niño-Southern Oscillation climate pattern, continues across the tropical Pacific Ocean (*upper-left figure*). As of early August, odds of persisting through winter increased from 90% to 95% compared to July’s forecast, and the chance of a strong event is now above 60%. The strength of the event doesn’t reliably predict the magnitude of its impacts, but does increase the chances that some level of impacts will occur in places with a history of ENSO influences. Typically El Niño suppresses Atlantic hurricane activity (*upper-right figure*), but extremely warm sea-surface temperatures have offset the negative influence thus far. Looking ahead, El Niño’s influence on autumn climate is not as pronounced compared to the winter months. The latter tends to be cool and wet thanks to an enhanced subtropical jet that acts as a driver of greater potential for severe weather (as we saw in June) with more southern mean storm tracks. The cool temperatures stem more from increased cloud and storm coverage, not necessarily from cooler airmasses dropping in from the north.

Autumn Outlook: The Climate Prediction Center calls for odds leaning towards above-normal temperatures with likely above-normal precipitation (*figures to the right*) from October through December across the region at 33-40% and 40-50%, respectively. The normal autumn mean temperature and rainfall accumulation for Tallahassee is 69.4° and 11.55”. Given the favorable precipitation probabilities, drought removal across the FL Panhandle and Southern AL appears likely (*figure below*).



River Flood Risk: The long-range [river flood risk](#) is low over the next 3 months for local area rivers. The Apalachicola River near Blountstown and Ochlockonee Rivers near Concord & Thomasville have between a 25 and 50% chance of exceeding at least minor flood stage during that timespan.