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WEATHER SERVICE OFFICE.

Tallahas NEWS AND NOTES FROM YOUR LOCAL NATIONAL

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.

2020 Hurricane Season Review By Israel Gonzalez

This season will be remembered for its hyperactivity, which broke the 2005 record for most total storms (30, bottom-right figure), exhausting the alphabetical list by mid-season! Of the 30 storms, 13 were hurricanes (2nd most), and 6 became major (tied for 2nd most), trailing only 2005. There were also 10 storms that rapidly intensified as sampled by NOAA and the US Air Force. The US experienced a record 12 total landfalls, with Louisiana getting hit 5 times! The tone was set early when 2 storms were named (Arthur and Bertha) in May, followed by Cristobal forming on June 1st, the official start of the season. Cristobal made landfall in Louisiana as a tropical storm a few days later. The season really took off in late August, when Hurricanes Laura and Marco posed a dual threat to the Gulf coast! Laura would go on to steal the spotlight, by rapidly intensifying over the central Gulf into the 1st major hurricane of the season, making landfall in western Louisiana with max sustained winds of 150 mph, while Marco fell apart. September took things to another level, with 10 named storms (record for any month) and the 1st Greek letter (Alpha) used by the

18th! The most impactful September storm was Hurricane Sally, which stalled off the northeast Gulf coast for a couple days before making landfall near Gulf Shores, AL at category-2 strength. Sally's slow motion produced widespread flooding for many areas along and east of its track. Tropical hyperactivity continued through October as 5 additional storms were named, with Hurricanes Delta and Zeta making landfall in Louisiana within 3 weeks of each other! Delta's landfall location was also ~10 miles east of where Laura moved ashore nearly a couple months prior. On Halloween, Eta was named as a tropical storm for the 1st time in history. Eta rapidly intensify all the way up to landfall in the northeast Nicaraguan coast as a category-4 hurricane on 11/3. A couple days later, Eta regenerated in the northwest Caribbean and followed an erratic path across central Cuba, Upper Keys, southwest Gulf, and western FL coast, making for the longest lived November named storm (10 days) on record. Less than 2 weeks later, lota formed in the Caribbean and rapidly intensi-

fied to become the only category-5 hurricane of the season (and latest on record to do so), which also extended the streak for seasons having at least one category-5 hurricane to 5 years! Iota made landfall ~15 miles south of where Eta struck with max sustained winds of 155 mph. This season marked the 1st time the Atlantic saw 2 major hurricanes in November.

Although our area was spared from direct strikes, we still experienced local impacts this season. Sally was most impactful as its slow-motion caused widespread, extreme flooding in the Panhandle and southeast AL (more on pg.2). Cristobal and Marco produced localized flash flooding in Madison County (13-15" of rain) and Apalachicola, FL (nearly 8", setting a new daily rainfall record for 8/23), respectively. Lastly, fast-moving Hurricane Zeta briefly brought tropical storm force winds/gusts to the Panhandle and southeast AL. Photo collage credit goes to Alfred-Wegener-Institute/Lianna Nixon and NWS TAFB.







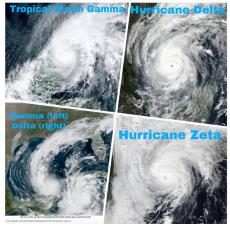
Monthly Highlights & Climate Summary By Israel Gonzalez & Tim Barry

September: September was characterized by above-average rainfall and hyperactive tropical activity, when a total of 9.55" fell at the Tallahassee airport (4.86" > normal) and 10 named storms formed! The greatest 24-hr accumulation was 3.89" on the 16th from slow-moving Hurricane Sally. The FL Panhandle and southeast AL suffered the worst impacts from Sally's rainbands (figure on right), with Mossy Head, FL (Walton County) having the greatest accumulation of 17.84", and record flooding at Shoal River near that location (25.65 ft) among 8. A total of 42 Flash Flood Warnings were issued in a 38-hr period, with 23 considerable and 2 catastrophic/emergency tags, followed by an Areal



Flood Warning the following day for standing water and damaged roads! Additional impacts included minor storm surge/coastal flooding, and a brief, weak EF-0 tornado (75 mph) in Cook County, GA. More info on Sally here: https://www.weather.gov/tae/Sally2020. A non-tropical rain event on the 28th also caused flash flooding in Apalachicola, where 7.95" fell, shattering the daily rain total of 3.71" in 1942, vaulting Apalachicola to its wettest September on record (dating back to 1975)! Despite the rainy month, mean temperatures (79°) were slightly above average (78.2°).

Octtober: The well-above normal temperatures and continued hyperactivity in the Atlantic basin made for a tropical October. The mean temperature for the month at Tallahassee was 74.5° (+5.1° anomaly), with an average min temperature of 65° (+7.7° anomaly). A new daily max temperature record of 90° was set on the 13th, tying 2017. In the Tropics, there were 5 named storms (3 in the Gulffigure on right) in the month, which tied 2005 for most total storms in a single season at 28 after Tropical Storm Eta formed on Halloween! Just prior to the record-tying feat, Hurricane Zeta bypassed our area just to the north on the 29th. Portions of the FL Panhandle and southeast AL did experience tropical-storm force winds/gusts, with Ozark Cairns Army Airfield, and Tyndall Air Force Base & Panama City recording 47 mph and 45 mph, as the highest wind reports for AL and FL, respectively



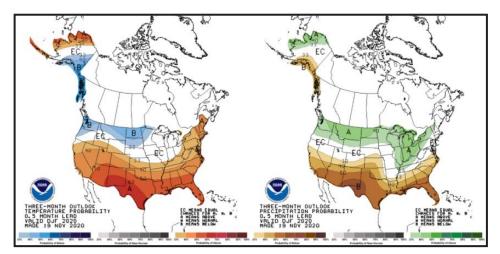
November: November did not feel much like fall when mean temperatures were over 6° > normal! In fact, Tallahassee and Apalachicola set 11 new daily max temperature records during the month, combined, with Apalachicola seeing an incredible 6 consecutive broken or tied records from the 7th to the 12th! The Tropics also made a final, memorable push before the Hurricane Season officially concluded at the end of the month, with Hurricane Eta and Iota becoming the strongest storms of the year! Lastly, a strong late-month frontal system moving across our area made for a severe weather event on the 29th into the 30th – highlighted by a confirmed EF-1 tornado (105 mph winds—figure on upper right) in Madison County, FL. A cold blast of Arctic air filtered in behind the front which prompted the



blast of Arctic air filtered in behind the front, which prompted the issuance of the first Freeze Warnings of the season on the 30th (figure on left) to set the early winter tone.

Climate Summary by Tim Barry: During Fall 2020, Tallahassee saw temperatures that were much warmer than normal. The average temperature was 73.4° (4.1° > normal), making for the 2nd warmest Autumn on record, trailing only 2015 (73.8°). The highest temperature recorded this past season was 98° on 9/5 (lowest was 34° on 11/3): https://www.weather.gov/media/tae/fall2020 T timeseries.pdf. A total of 5 record high temperatures were tied in October (1) and November (4). On average, Tallahassee experiences 2 freezes during the fall season with the average first date on 11/16, but there were none through this November. Autumn is climatologically Tallahassee's driest season, but was wetter than average this year, when the airport received 15.19" (3.77" > normal), with September accounting for over double the rain totals, while October contributed the least (~13%): https://www.weather.gov/media/tae/fall2020 P timeseries.pdf

Winter Outlook by Eric Bunker & Tim Barry



Climate Patterns by Eric Bunker: Winter forecasts in The South can be challenging. We rely on trends of global teleconnections (downstream impacts), indices and oscillations (e.g., El Nino/La Nina) to give seasonal predictions. The El Nino-Southern Oscillation is characterized by sea-surface temperature anomalies in the equatorial Pacific Ocean, which are currently below normal, thus making for La Nina conditions. La Nina typically contributes to locally warm/dry winters from a weakened jet stream, but can be mitigated by other oscillations such as the North Atlantic Oscillation (NAO). When NAO is in a negative phase, cold air tends to be forced south across the eastern US, which was the case for the end of November into early December. Although a warm/dry end to 2020 is expected, a prolonged negative NAO could lead to bouts of winter-like conditions for the southeast this coming season. Stay tuned!

Winter Outlook by Tim Barry: The current winter outlook from the Climate Prediction Center shows better chances for above normal temperatures and below normal rainfall from December through February (figure above). The average temperatures for those months are 53.2°, 51.2° and 54.7°, respectively. The normal rainfall for those months are 3.90°, 4.34°, and 4.85°, respectively. More information found here: https://www.cpc.ncep.noaa.gov/.



More info on La Nina

https://www.cpc.ncep.noaa.gov/ products/analysis_monitoring/ enso_advisory/ensodisc.shtml

More info on NAO

https://www.cpc.ncep.noaa.gov/data/ teledoc/nao.shtml



Employee Spotlight - Jasmine Montgomery

Jasmine is a Texas native who was the second of 3 new employees that joined our office this summer as a forecaster. She most recently worked as a GIS Specialist for AECOM in Dallas, TX and has NWS volunteer/intern experience at the Storm Prediction Center and the NWS office in Ft. Worth, TX. Get to know her better in the question & answer section below:

How did you become interested in Meteorology? I knew from a young age that I was interested in the Earth Sciences. How I came to meteorology was really by overcoming a fear. I used to be afraid of lightning and thunder but, as I learned more about it, the fear went away. Near the end of my years in elementary school, I would tell people what the weather would be and I'd be beaming with pride and joy for sharing valuable information, and I never stopped.

What were your volunteer experiences in NWS Ft Worth, TX & Storm Prediction Center like? Fort Worth was an interesting experience. In the summer, I was mainly collecting data from the Spring months. Look up Spring 2015 in North Texas! Otherwise, the summer was pretty calm, so I got to shadow the forecasters. When a tropical system tracked up into the forecast area, it was pretty cool to see an "All Hands on Deck" scenario. Which, I've seen plenty of times now since being in Tallahassee. Volunteering at the SPC did not go exactly as planned but I made the most of it. I basically conducted a solo research project using GIS (Geographic Information Systems) to track the frequency of tornadoes across the contiguous US by time of year, and time of day; along with the strength of the tornadoes and their locations.

You also have some GIS expertise. Could you explain what GIS is and how you can apply it to your current position with NWS Tallahassee? GIS is a science of mapping, basically, but not cartography. All of the information that can be shown on a map is catalogued digitally. GIS in meteorology is very helpful for mapping out (analyzing) any damage paths, especially for damage caused by tornadoes. With just a small set of points, a whole story could be said about what happened at those locations.

How does Texas compare with Florida, weather wise? I am from the Dallas area, so the weather here is definitely cooler in the summer, and wetter. I am learning that severe weather in Florida is not severe weather in Texas. The definition of "severe" probably needs to be amended. I do miss the unpredictability of Texas weather but, I am learning that Florida is very much similar to that except for the 100° weather, the strong cold fronts, and dry lines. I can only speak for N.TX weather and Texas is a big state, but, in my experience, Texas has more extremes whereas Florida is mild. N.TX, is also not a "dry heat".

Outside of work, what are your hobbies and interests? Mainly catching up on the day-to-day news and TV shows. I also enjoy reading novels whenever I can. I like to go shopping (online now). And as soon as COVID is over, I would like to once again visit museums, the movies, listen to a live orchestra (especially for holidays), and catch a Broadway or Broadway-style musical.



Management-Admin Team

Tom Johnstone, MIC Mark Wool, WCM Parks Camp, SOO Doug Sherrick, ESA Jennifer Nichols, ASA Vacant, ITO Kelly Godsey, Hydrologist Ricardo Humphreys, OPL

Lead Forecasters

Don Van Dyke Donal Harrigan Jessica Fieux Blair Scholl Vacant

Forecasters

Tim Barry
Lance Franck
Claudia (Jeanie) McDermott
Wright Dobbs
Eric Bunker
Israel Gonzalez
Kristian Oliver
Jasmine Montgomery
Molly Merrifield

Electronic Technicians

Vacant Vacant



Fall Outreach Efforts By Mark Wool

During the fall months, NWS Tallahassee's community outreach efforts continued to be virtual. In September, we started a series of one-hour online courses for Emergency Managers. On the 1st, Kelly Godsey and Molly Merrifield presented "Using the NWS Tallahassee Website and Available Web-based Applications." They paired up again on the 29th to teach "Basics of Radar." In between, Jessica Fieux presented "Tropical Season Refresh and Reminders" on the 22nd. On the 9th, Mark Wool gave a hurricane season update to the <u>Apalachee Local Emergency Planning Committee (ALEPC)</u>.

In October, Mark conducted a virtual presentation for the Osher Lifelong Learning Institute. Mark discussed the NWS' history, organization and programs, and also included a brief hurricane season update. Kelly and Molly resumed the EM training series on the 13th with "Severe Weather Season and You—How to Monitor and Prepare." On the 27th, they conducted a virtual office tour. We observed Alabama's Fall Severe Weather Awareness Day on the 21st by posting safety messaging to social media. On the 30th, Mark conducted storm spotter training for FSU's Community Emergency Response Volunteer group.

In November, Mark was interviewed by Tom Urban of the News Service of Florida on the 5th on expected impacts from Hurricane Eta. A follow-up interview occurred on the 12th. On the 18th, Mark gave a hurricane season wrap-up presentation to the ALEPC. The next day, Mark was interviewed by WCTV's Hannah Messier about the hyperactive hurricane season, with a similar interview given to Tom Urban on the 24th.



