

# Shade Tree News

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## NOAA Unveils Latest update to the U.S. Global Weather Forecast



A supercell thunderstorm in Kansas on May 27, 2019. Photo credit: Mike Coniglio/ NOAA National Severe Storms Laboratory

Following rigorous testing led by NOAA's National Centers for Environmental Prediction (NCEP), NOAA's Global Forecast System (GFS) underwent a significant upgrade on June 12 to help improve forecasts of severe weather, winter storms, and tropical cyclone intensity and track. Over 100 scientists, modelers, programmers, and technicians from around the country tested the new

model against real-time evaluations for a year, as well as against historic weather dating back an additional three years and determined that the upgraded FV3-based GFS performed better across a wide range of weather phenomena.

The scientific and performance evaluation shows that the upgraded GFS provides results equal to or better than the current global model in many measures. Neil Jacobs, Ph.D., acting NOAA administrator noted, "The significant enhancements to the GFS, along with creating NOAA's new Earth Prediction Innovation Center, are positioning the U.S. to reclaim international leadership in the global earth-system modeling community." Upgrading the model has a significant impact on NOAA's ability to make more accurate 1-2 day forecasts and increase the level of accuracy for 3-7 day forecasts.

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Source: NOAA

## NOAA Seeks Ideas from the Weather Industry Academia to Improve Weather Prediction

On June 7, NOAA announced that it is seeking ideas, recommendations, and best practices from the weather industry and researchers on how to best develop a virtual Earth Prediction Innovation Center (EPIC).

EPIC will create a community earth system prediction model that is accessible to the public and uses innovative strategies to host and manage the modeling system. EPIC will make it easier for scientists outside of NOAA to contribute to NOAA's forecast models, helping NOAA improve its models by drawing from the strength of the research community. The center will leverage existing NOAA resources to accelerate advances to the Unified Forecast System, a community-based, coupled Earth system model designed to meet NOAA's operational forecast mission to protect life and property and improve economic growth.

Ideas and recommendations may be submitted online until July 10 at 12:00 PM ET. If you have an idea that you would like to submit, please reach out and we can provide you with more information on how to do so!

### Building a Weather-Ready Nation: Camping Safety



## CAMPING SAFETY TIPS

- **FLASH FLOODING**  
**Know Your Action**  
Avoid hiking in canyons  
Don't camp near streams or rivers
- **HEAT**  
**Know Your Action**  
Remain hydrated/bring extra water  
Wear light, loose fitting clothing  
Use sunscreen  
Take breaks in shade
- **LIGHTNING**  
**Know Your Action**  
Remain weather-ready  
If you hear thunder or see lightning...  
go immediately to an enclosed building or hard-topped vehicle.  
Avoid isolated tall trees or ridge tops.

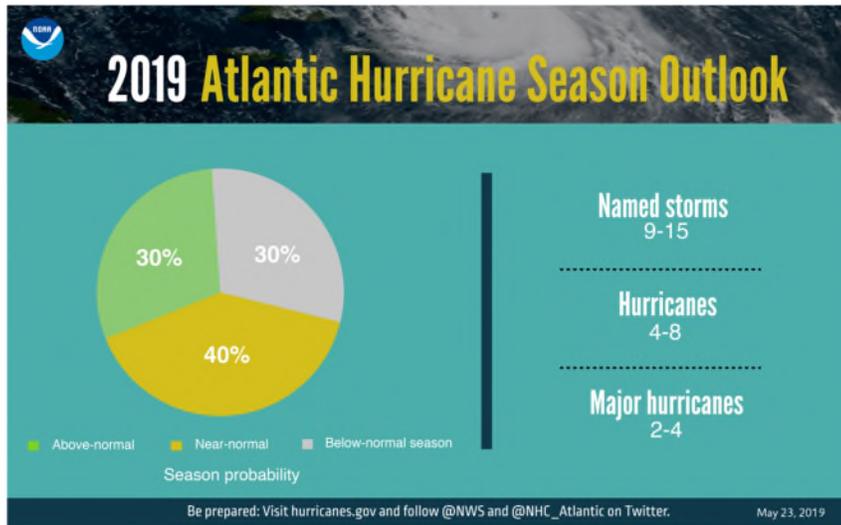
**KNOW BEFORE YOU GO**  
Check the forecast at [weather.gov](http://weather.gov)  
Always pack for inclement weather, regardless of the forecast!

As a Weather Ready Nation ambassador, we at Shade Tree Meteorology have committed to communicate National Weather Service messages about forecasts and ongoing weather hazards, as well as educate our clients on appropriate weather preparedness practices.

## Hazardous Weather Preparedness: Hurricanes

Hurricane season has officially begun! The hurricane season extends from June 1 to November 30, and NOAA's Climate Prediction Center is predicting that a near-normal Atlantic season is most likely to occur this year.

NOAA's outlook is for overall seasonal activity and is not a landfall forecast. Hurricane preparedness is



critically important for the 2019 hurricane season, just as it is every year. This outlook reflects competing climate factors. The ongoing El Niño is expected to persist and suppress the intensity of the hurricane season. Countering El Niño is the expected combination of warmer-than-average sea-surface temperatures in the tropical Atlantic Ocean and Caribbean Sea, and an enhanced west African monsoon, both of which favor increased hurricane activity.

Meteorologists will have a spread of new tools to utilize this hurricane season, including NOAA's new GOES satellites that we discussed in our Spring 2019 newsletter, the new GFS model discussed on page 1 of this newsletter, and high-resolution radar data from NOAA's Hurricane Hunter aircraft. "New satellite data and other upgrades to products and services from NOAA enable a more Weather-Ready Nation by providing the public and decision makers with the information needed to take action before, during, and after a hurricane," said Neil Jacobs, Ph.D., acting NOAA administrator. "NOAA is driving towards a community-based development program for future weather and climate modeling to deliver the very best forecasts, by leveraging new investments in research and working with the weather enterprise," added Jacobs. NOAA's National Hurricane Center and NWS office in San Juan will expand the coastal storm surge watches and warnings in 2019 to include Puerto Rico and the U.S. Virgin Islands. In addition, NHC will display excessive rainfall outlooks on its website, providing greater visibility of one of the most dangerous inland threats from hurricanes.

Regardless of what the outlook is, now is the time to prepare. "Preparing ahead of a disaster is the joint responsibility of all levels of government, the private sector, and the public," said Daniel Kaniewski, Ph.D., FEMA deputy administrator for resilience. "It only takes one event to devastate a community so now is the time to prepare. Do you have cash on hand? Do you have adequate insurance, including flood insurance? Does your family have communication and evacuation plans? Stay tuned to your local news and download the FEMA app to get alerts, and make sure you heed any warnings issued by local officials."



Shade Tree Meteorology, LLC

## From the President's Desk

Dear valued clients,

What a busy spring it has been, both weather-wise and at STM headquarters! If you follow our [blog](#), you know that the weather this spring has been very active in the Plains and the Midwest. Flooding, tornadoes, and lightning have occurred in many areas. Thankfully, due to excellent collaboration between the National Weather Service, the private sector, and the media, clear and consistent messaging has minimized the loss of life despite much damage to property. Here in the Northeast, we have tried to make the most of the relatively few sunny days that we've had and enjoy the outdoors! We always include timely and relevant weather stories on our blog, so be sure to check that out for some interesting articles and great preparedness tips for you and your family.

At STM, this spring has brought us new cases and clients at an unprecedented rate. We thank you for your continued business; your many word of mouth referrals mean so much to us. Kelly and I continue to provide high-quality meteorological analyses for each and every case, and we are excited to welcome our new customers on board. We recognize that there are unique scientific issues every case, and we intend to continue providing the customized service that STM has been known for since 2004. As always, if you have a new case you would like us to review, please go right to our [online conflict check form](#), and one of us will get back to you within a day.

### Shade Tree Meteorology

518-831-9374

[alicia.wasula@shadetreemeteorology.com](mailto:alicia.wasula@shadetreemeteorology.com)

[kelly.neugent@shadetreemeteorology.com](mailto:kelly.neugent@shadetreemeteorology.com)

<http://www.shadetreemeteorology.com>

### A Full-Service Forensic Meteorology Firm with a Team of Certified Consulting Meteorologists Specializing in Hazardous Weather Event Reconstruction

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- **Over a decade of experience as a researcher and teacher in the field of meteorology**
- **Experience providing comprehensive, data-driven research to prepare customized reports based on stakeholder needs**