



Home / News

https://www.bgdailynews.com/news/wku-hosts-national-drought-forum-during-local-drought/article_82eb52d9-96d4-59eb-935d-edc0d581c07c.html

WKU hosts national drought forum during local drought

CAROLINE EGGERS ceggers@bgdailynews.com 44 min ago

The U.S. Drought Monitor recorded abnormally dry conditions on September 10, 2019, in various parts of the nation, including Kentucky.

National Oceanic and Atmospheric Administration

Droughts impact everything from wildfires and agricultural yields to energy bills and air pollution. Hotter, drier conditions are increasing throughout much of the planet along with the need for improved drought monitoring and mitigation efforts.

That's why climate and meteorological experts from across the nation convened this week at Western Kentucky University to discuss the latest science and policy of drought monitoring at the Biennial U.S. Drought Monitor Forum.

Opening the forum, state climatologist and WKU professor Stuart Foster provided an overview of the area's current drought conditions.

"Kentucky is normally a very wet state," Foster said, with abundant rivers, surface streams and lakes.

Relative to other parts of the country, Foster suggested Kentucky tends to experience less severe droughts. But Kentucky still has bad droughts and is experiencing abnormally dry conditions now.

Through Wednesday, the Kentucky Mesonet recorded 0.03 inches of rain and 10 days of 90-plus degree weather in Warren County this month. Since 1895, there have been four recordings of less than an inch of rain in September – and forecasts suggest this month could be the fifth, according to Foster, who serves as director for the Kentucky Mesonet.

Average annual precipitation is about 50 inches in Bowling Green, and Warren County has received 47.17 inches this year. Earlier this year, Bowling Green received 11.4 inches of rain during its second-wettest February on record, and 8.26 inches during its ninth-wettest June on record, according to the National Weather Service.

Despite the heavy rainfall, Warren County now faces what could be considered a “flash drought,” Foster said.

“It’s truly been a remarkable period,” he said.

“Flash drought” is the latest term to be added to the American Meteorological Society index, and Jason Otkin, a scientist with the University of Wisconsin, helped write its definition. (The term flash drought was coined by Mark Svodoba, director of the National Drought Mitigation Center, who presented at the conference.)

Picture this: Fields are green in June. In August, there’s a once-in-50-years drought.

Despite the idea that droughts are slowly-developing climate phenomenon, “drought intensification can be rapid,” Otkin said at the forum.

Droughts are not just about precipitation. Evaporative demand (how fast the atmosphere drinks up water vapor) and vegetation stress are important factors in flash droughts, according to Otkin.

As the Earth's temperatures rise and climate changes, floods and droughts are becoming more common. Hotter temperatures increase water evaporation, and warmer air can retain more moisture. This rapid evaporation can lead to droughts, and the bloated clouds

can also deliver heavier rainfall in shorter periods of time. On Aug. 27, for example, the southern part of Warren County received 3.56 inches of rain in 24 hours – and it's otherwise been dry.

The worst drought in Kentucky's recent history occurred in 2012 and prompted the state to develop certain groups to prepare for future droughts.

In 2018, WKU's Kentucky Climate Center received a two-year, \$200,000 grant from NOAA's National Integrated Drought Information System to develop the Kentucky Drought Early Warning System.

Foster said he's is leading this effort to develop user-friendly data visualization and analysis to “help us not get caught off-guard” with future droughts.

Fortunately, the tools to visualize this type of data continue to improve. Brad Pugh, a meteorologist at NOAA's Climate Prediction Center, discussed the advantages of using geographic information system applications to overlay various data sources – such as mean streamflow with standard precipitation indexes and current forecasts – to improve the quality and timeliness of drought representation on the U.S. Drought Monitor.

“You're able to visualize a lot of data,” Pugh said at the forum.

Charlene Felkley, the Midwest Climate Hub coordinator for the USDA Climate Hub, later demonstrated how drought monitoring data can be overlaid with agricultural data.





Droughts affect agriculture annually. Brad Rippey, a meteorologist with the U.S. Department of Agriculture, discussed on Tuesday the 2018 farm bill and its relation to the U.S. Drought Monitor.

USDA does not provide dedicated money to the U.S. Drought Monitor, and the farm bill makes “no mention” of mitigating drought risks, according to Rippey.

Within the world of agriculture, federally funded “safety nets” for droughts are most limited to animal agriculture through the livestock disaster forage program. Between 2011 and 2019, the U.S. spent about \$7 billion aiding livestock operations during droughts.

Droughts also contribute to high energy demand, according to James Everett, manager of the Tennessee Valley Authority’s River Forecast Center, who described the recent record flooding, drought and weather-related extremes in the area in the past decade during a presentation Tuesday.

“We know from science that we’ve had more extreme floods and more extreme droughts,” Everett said.

TVA manages 42,000 miles of watershed and 49 dams, including 29 dams used for hydroelectric power. The dams can help TVA control water quality and quantity during droughts and floods, according to Everett.

Droughts also affect forests, which can be at a greater risk for wildfires and insect disturbances during dry conditions, according to Steve McNulty, the Southeast Climate Hub coordinator for the USDA Climate Hub.

“Forests change slowly, they don’t respond to drought the same way agricultural crops do. Forest management is much easier with a proactive system,” said McNulty, who recommends that communities take steps to increase wildfire vigilance, wildfire response, insect and risk monitoring and forest water yield.

“Understanding historic patterns with future predictions is critical to forestry,” he said.

Since national scientists cover vast territories, the forum served as an opportunity for the experts to learn about the nuances of Kentucky’s climate and the work being completed at WKU, Foster said.

“I’ve been very pleased that we’ve had a very good dialogue of information on drought impacts, activities and issues here in the state provided to people at the national level,” Foster said.

– Follow reporter Caroline Eggers on Twitter @eggersdailynews or visit bgdailynews.com.

Caroline Eggers

News reporter.

▶ **TAKE A LOOK**

- **Men Don't Need Viagra If You Do This Once Daily**
- **Clint Eastwood Finally Confirms The Rumors On Today.**
- **A Tragic End Today For Laura Ingraham**
- **Sad News Confirmed For Tiger Woods**
- **My Flash x900 Is So Bright It Can Blind A Bear... No Patriot Should Leave Home**
- **Do This Every Day to Fix Your Thyroid**
- **4 Weird Signs You'll Live Past 100**
- **The 5G Device Every American Must Have This Year**
- **CBD 'Miracle Oil' Helps Fight Pain Naturally**
- **1 Trick Kills Erectile Dysfunction - Wives Are Speechless**

Powered by **FEEDNETWORK**

► RECOMMENDED

4 Weird Signs You'll Live Past 100

1 Trick Kills Erectile Dysfunction - Wives Are Speechless

Ad



Sad News Confirmed For Tiger Woods

The 5G Device Every American Must Have This Year

Powered by **FEEDNETWORK**