

What to know about red-flag warnings, an ominous wildfire forecast

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The northeast U.S. is no stranger to extreme weather and the warnings that come with it. But every now and then, residents are faced with an unfamiliar color in the forecast: red.

"If you get a red-flag [warning](#) on Long Island, the hair should stand up on the back of your neck," Heath Hockenberry, a fire [weather](#) program manager with the U.S. National Weather Service, said. "It is something to pay attention to."

The NWS issues an array of warnings and watches, but the most important during fire season is a red-flag warning, which actually shows up as neon pink on the weather map. These warnings can be issued in any place at any time, though. In mid-April, for example, the agency issued rare red flag warnings in the northeast U.S., including in the New York metro area. But unlike most of the other bulletins that flow out from the agency, weather is only a part of the message.

Red-flag warnings are issued when wildfires are expected to rage out of control. They've been around since the 1960s, making them older than the National Weather Service's name, which was adopted in the 1970s (It was formerly known as the U.S. Weather Bureau).

The agency raises red-flag warnings when humidity drops, winds rise, and vegetation is primed and ready to burn. It is that last part about potential fuels that marks one of the differences versus warnings focusing on thunderstorms, tornados and blizzards. The other is that humans play a major role in igniting wildfires.

People cannot start a tornado, but they are responsible for about half of all wildfires, Hockenberry said.

While dry air and [high winds](#) can occur anywhere in the U.S., the condition of trees and plants varies by region, he said. In the northeast U.S., trees have adapted to handle dry spells, meaning they don't burn as efficiently. That's in part why the region only sees a handful of red flag warnings each year.

In the southeastern U.S., many trees are filled with oily, burnable resin. When conditions dry out, the fire danger rises dramatically, Hockenberry said. A week without rain can prime the vegetation to burn.

Meanwhile, in the West, fire is a natural part of many ecosystems. It only takes a few hours of low humidity to prime grasses and small shrubs to become wildfire fuel. Parts of this region as well as the Great Plains can see red-flag warnings at almost any time of year.

Although hot and dry weather are hallmarks of climate change, red-flag warnings themselves aren't a good measure of the effect of rising greenhouse gas levels in the atmosphere, said Hockenberry. About 8,000 per year are posted across the country.

The NWS has issued more warnings than average over the past two years, but overall, the numbers are too inconsistent to tease out a trend. What is known, though, is the warming world has increased the length of wildfire season in many parts of the U.S. That trend is expected to continue as the planet heats up further.

"We are busier for longer," Hockenberry said. In fact, it doesn't make sense to think of a particular fire season in most places; now it has become a "fire year." For those living in [fire](#)-prone areas, that will make it even more important to keep eye out for red-flag warnings.

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