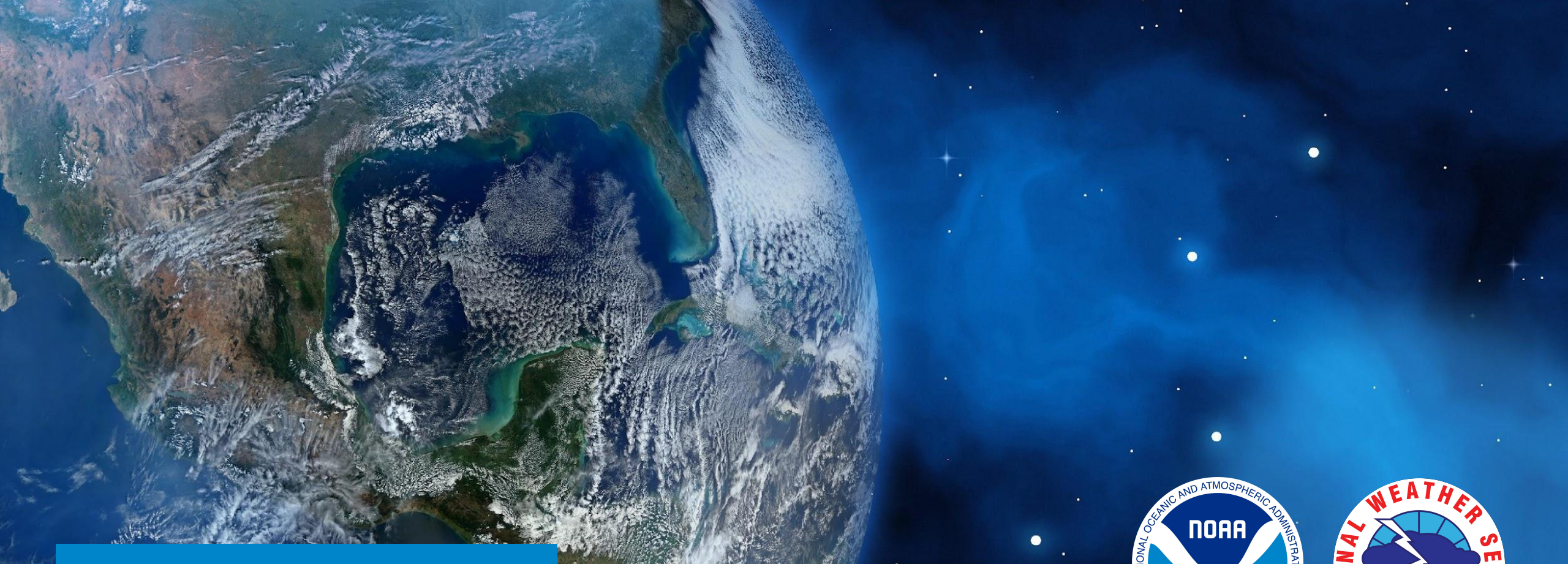


Wildfires in the Midwest

Hazardous Weather and the Role of the NWS

Matt Beitscher – Lead Meteorologist, NWS St. Louis

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service

What is the National Weather Service (NWS)?



Federal Government



Department of Commerce



**National Oceanic and
Atmospheric Administration**



National Weather Service



**National Weather Service
Weather Forecast Office**



NWS St. Louis

Your tax dollars at work for you, 24/7/365!

Our Mission:

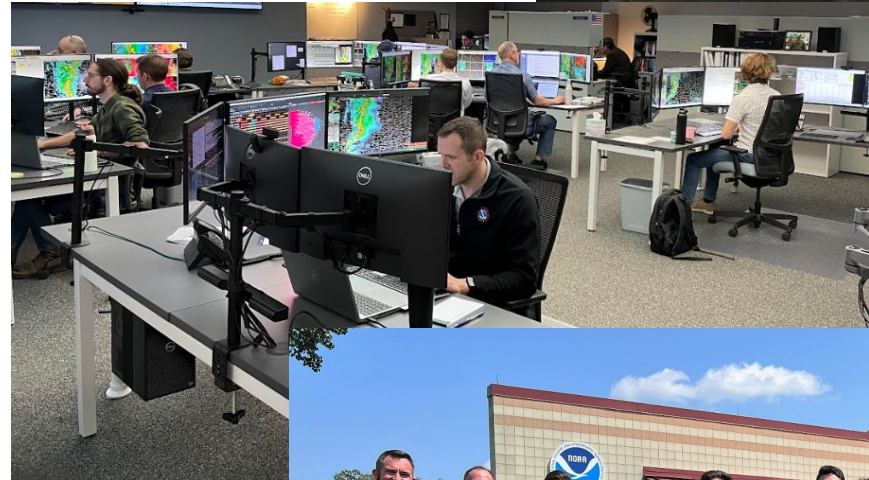
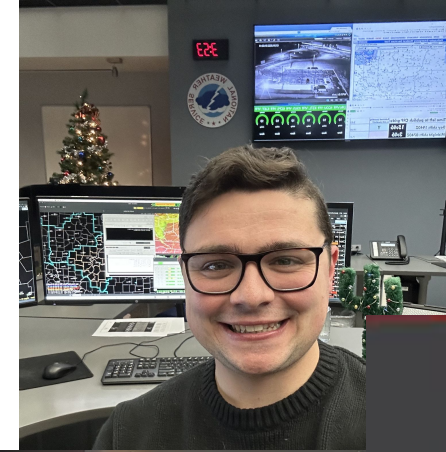
“Provide weather, water and climate data, forecasts, warnings, and impact-based decision support services for the protection of life and property and enhancement of the national economy.”

Our Staff:

- 17 meteorologists
- 1 Hydrologist
- Technicians, IT personnel, administrative staff

Our Day-to-Day Operations:

- Watches/warnings
- Weather decision support services to our core partners
- Public 7-day forecast
- River forecasts
- Aviation forecasts



Most People Only See The Tip of the Weather Iceberg



**TORNADO
WARNING**

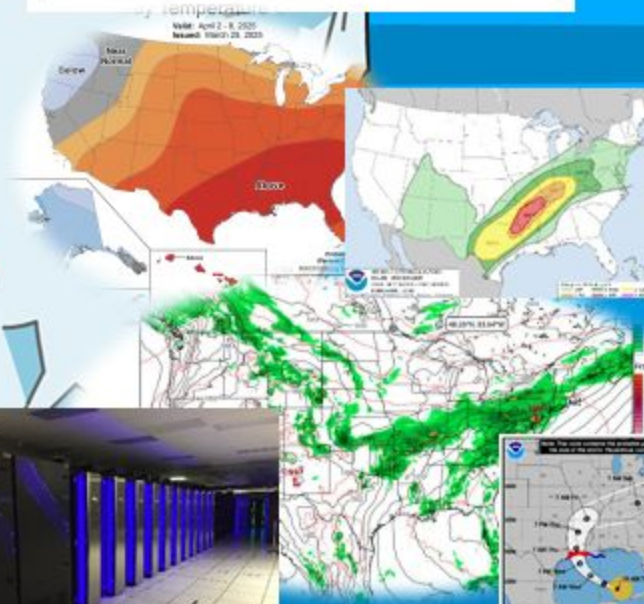
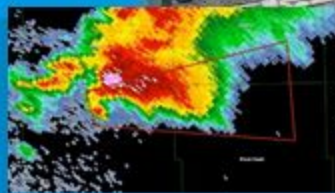


Observations

Local Forecast Office

National Centers for
Environmental Prediction

River Forecasting



Common hazardous weather in the Midwest



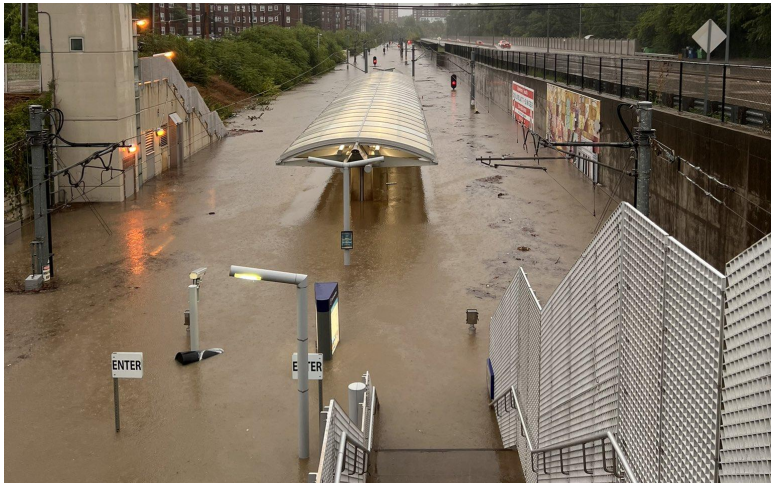
Severe Weather



Winter Storms



Extreme Temperatures



Flooding



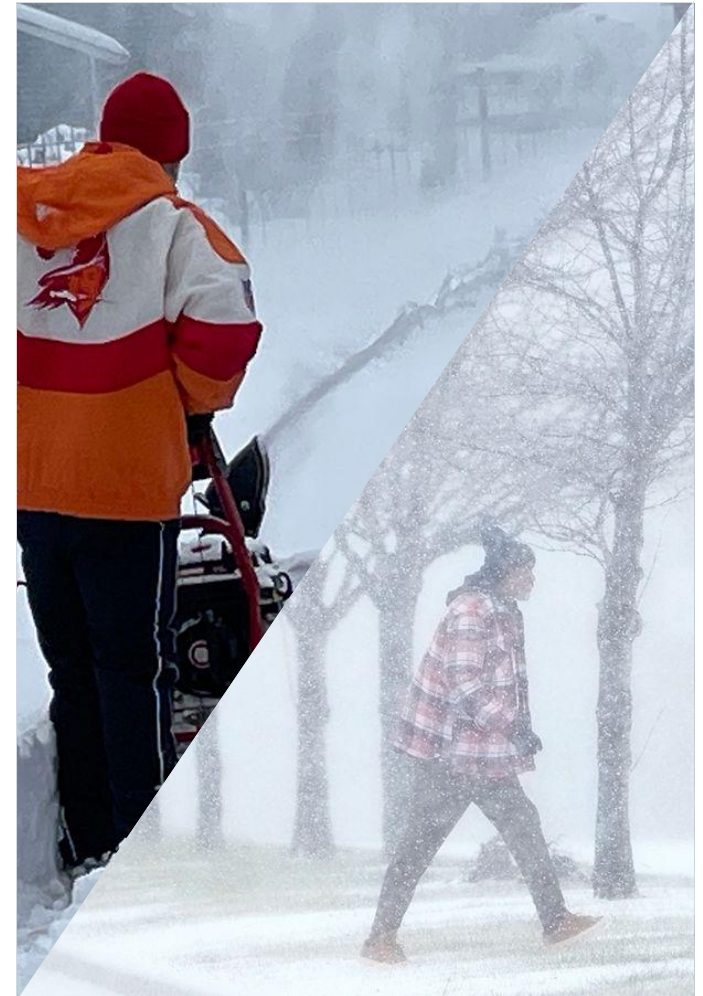
Drought



Wildfires (!?)

What else IS there?

The future holds more cascading impacts and swings between extremes.



Wildfires are normal

However, they are becoming larger and more frequent.

Warmer temperatures

During the months we typically see wildfires (late February – early April and late September – early November) temperatures are warming compared to normal and projected to continue this trend.

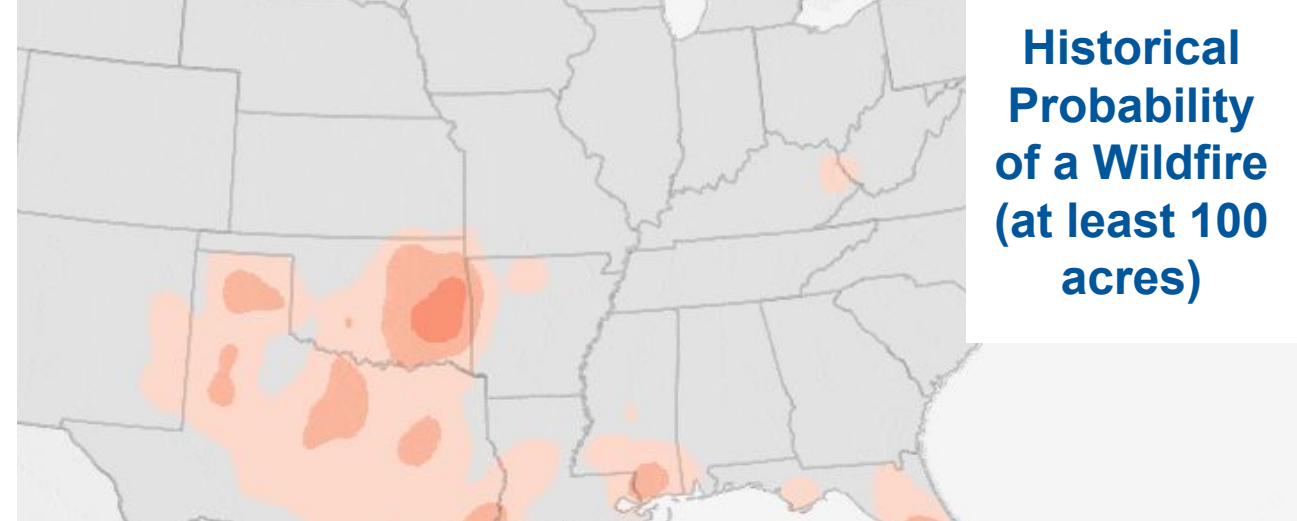
Higher frequency of extreme rainfall

The high-end rainfall events are becoming more frequent in Missouri, which help fuels (grass, shrubs, trees) grow.

Periods of drought follow

If drought follows a wet period, the fuels will dry out and be ripe for fires.

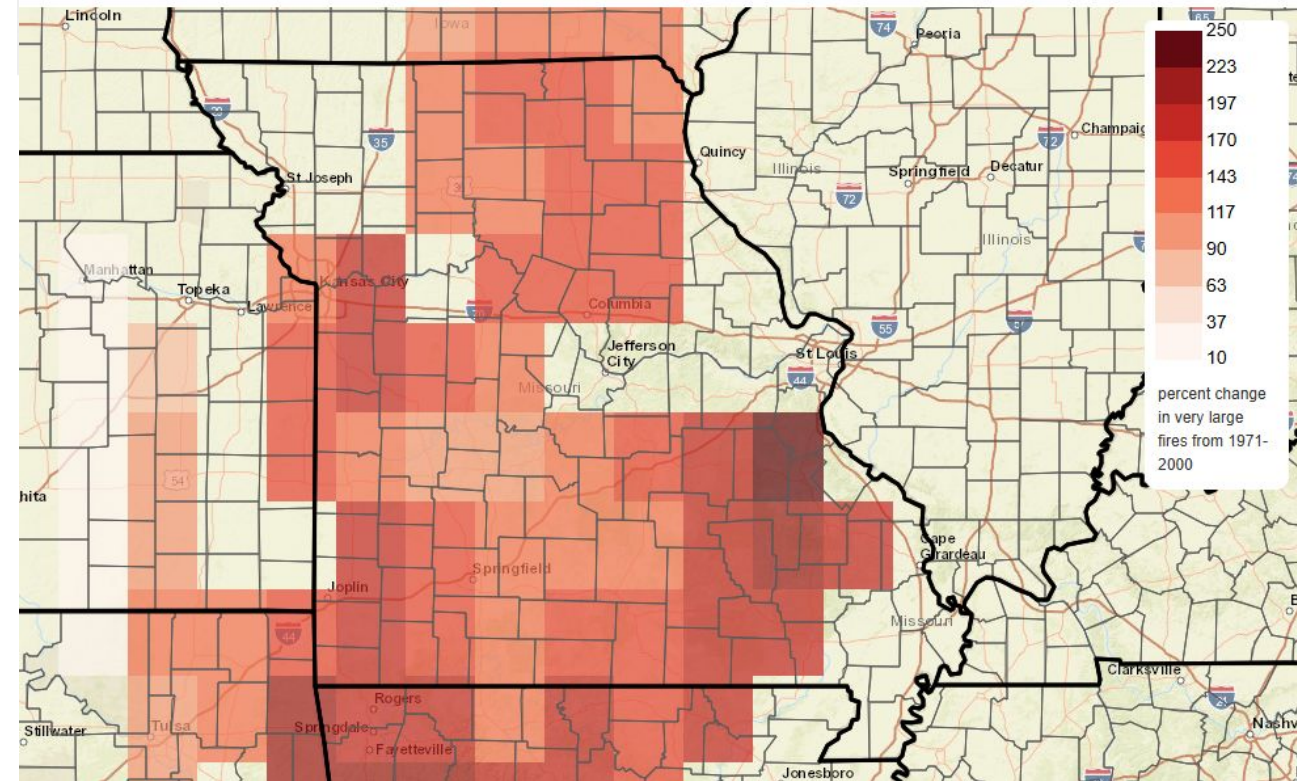
**Historical
Probability
of a Wildfire
(at least 100
acres)**



Projected Change in Very Large Fire Potential, Fall (Sept-Oct-Nov)

Higher Emissions (RCP 8.5) 2040-2069 vs. historical simulation 1971-2000, mean change

Multi-model mean derived from 17 downscaled CMIP5 models



What more wildland fire means for us



Threat to life and property

The most immediate and obvious impact is the threat to lives and property that uncontrolled fire poses. With fire activity on the rise in areas unfamiliar with it, the risk for impacts increases.



Compromised infrastructure

Wildland fires are almost all caused by humans in some capacity across the Midwest. Power lines, sparks from trains, or idling trucks on grass all can cause a fire. As a result, infrastructure is at risk.



Air Quality Concerns

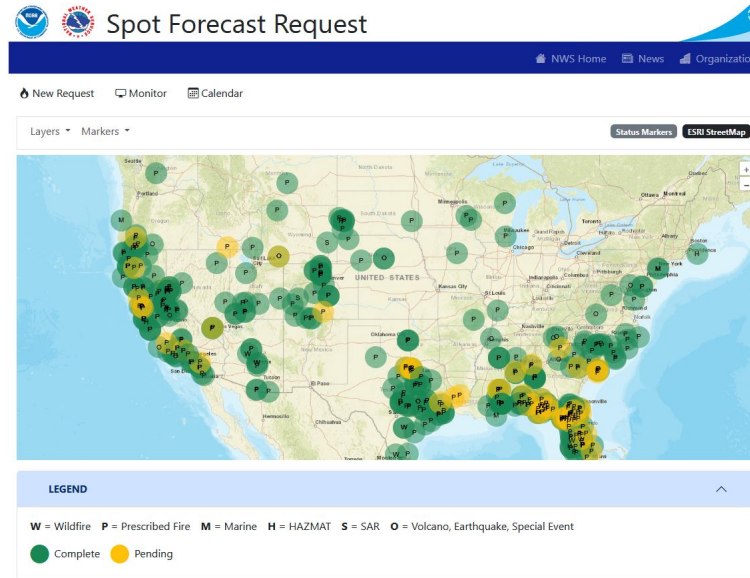
Wildfires can result in air quality concerns depending on atmospheric conditions. If areas are unfamiliar with these risks, they can be caught off guard.

How we monitor wildfires and supports partners



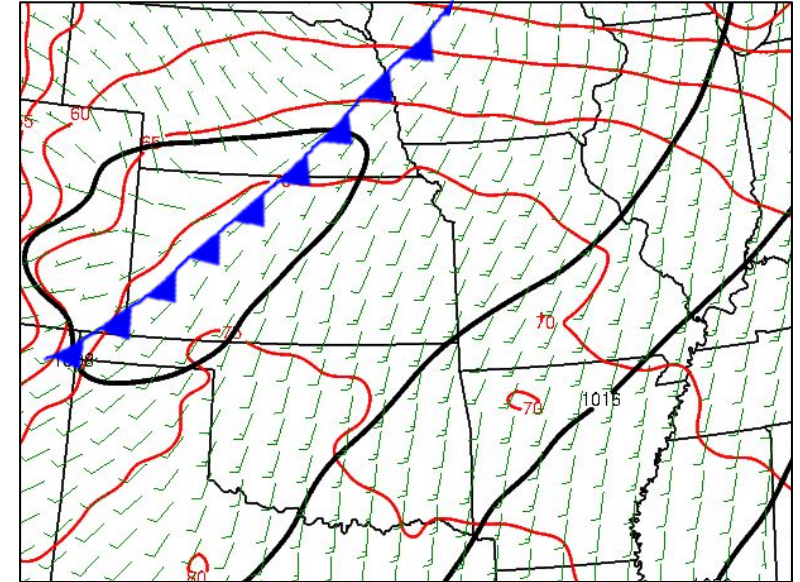
Hotspot Detection/Alerts

Satellites from space can detect wildfires within minutes, sometimes before anyone is aware they're occurring. This can aid in resource deployment and potential evacuations.



Tactical Forecasts/Support

From briefings and on-site support to tactical fire weather forecasts, we are constantly supporting land management and emergency response partners with regard to fire weather threats.



Local Expertise/Research

A typical fire weather pattern varies across the nation, so local expertise from the 122 NWS Weather Forecast Offices is crucial. We also engage in research to fine-tune our understanding of fire danger.



**Wildland fire is a growing threat, and the
NWS is committed to supporting public
safety initiatives to protect life and property.**

Thank you!
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