



NATIONAL WEATHER SERVICE

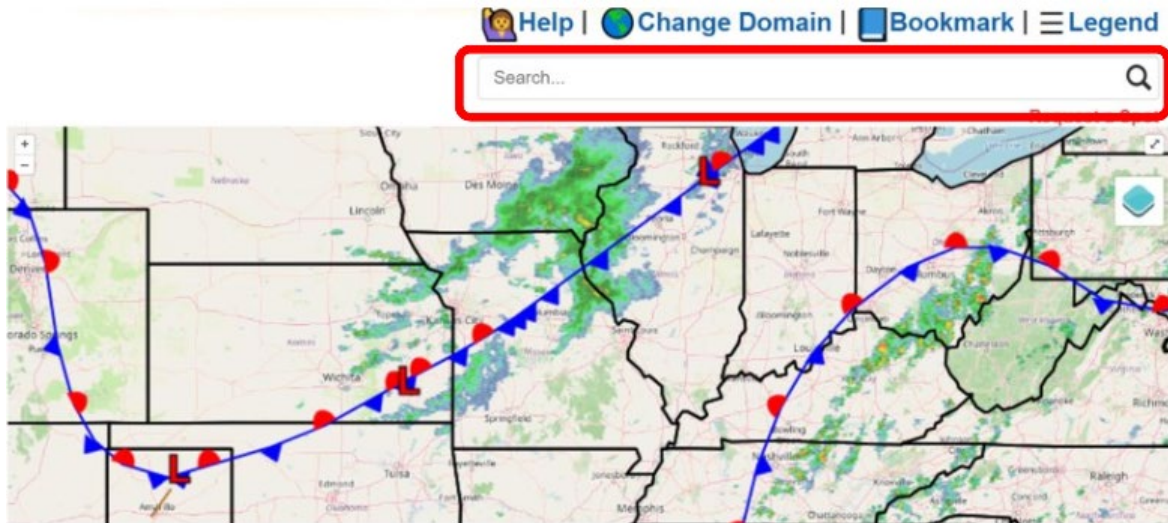
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION



Fire Weather Dashboard

<https://www.weather.gov/dlh/fwd>

1. Enter Lat/Long or Name of City in the Search Box OR scroll and click location on the map.



2. Verify the *Gridded Forecast Point* represents your project location.



Surface Front Forecast: Wed Aug 5 ○ Thu Aug 6 ● Fri Aug 7 ○

Table updated: 126 pm CDT Wed. 8/5/2026 (Last Update: 135 minutes ago)

[Click for Fire Forecast: MOZ076](#)

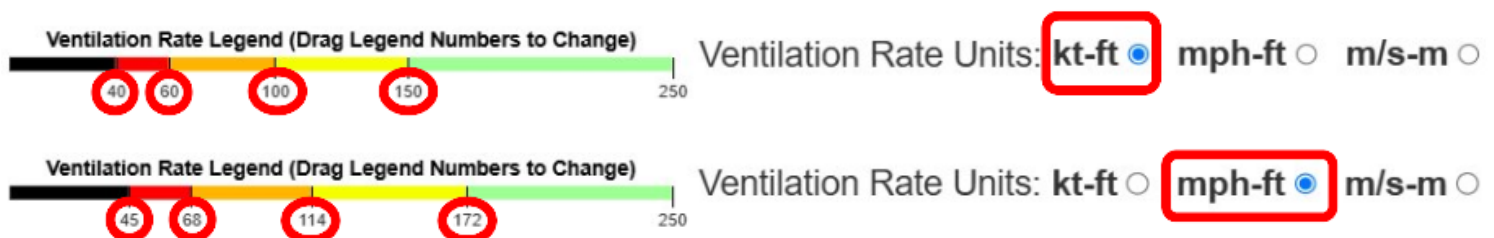
[PAH Forecast Discussion](#)

[2 miles ENE of Perryville, MO](#) (Elevation: 495 ft)

3. Click *Bookmark*, click *Copy to Clipboard*, then open a new browser tab, paste the link into the browser, and **then bookmark/save this link in your browser**. This will now take you to this gridded forecast point location in the future. For other project locations, select the correct location for a *Gridded Forecast Point* or save a new bookmark. **Always verify the location before viewing the weather forecast!**



4. You may view the *Weekly Summary* table showing forecasted minimum/maximum values and scroll down to view the *Hourly Table* and/or *Hourly Graphs* showing forecasted values for each hour for the next 8 days.
5. Note, *Ventilation Rate* units default to knot-feet and the color legend is adjustable by the user's preference.
 - i. Select the unit of preference and slide the vent rate legend units/color break points to match the *Smoke Dispersal* categories on the following page of this guide.
 - ii. Scroll up and click *Bookmark*, copy the link, paste in your browser and save/bookmark this in your browser to retain your ventilation rate preferences for this forecast location.
 - i. Note, m/s-m does not bookmark at this time.



MIXING HEIGHT, TRANSPORT WIND, and Vent Rate

A system exists for dealing with the ability of the atmosphere to mix and transport smoke throughout the boundary layer (which can extend upwards of 5000 feet above the surface) and over large distances.

“Mixing Height” or “Mixing Depth” (ft or m) signifies the height above the surface throughout which a pollutant such as smoke can be dispersed. During times of surface temperature inversions (typically nighttime with clear skies), the mixing height goes to zero and smoke dispersion is minimal.

“Transport Wind” signifies the average wind speed (knots or m/s) throughout the depth of the mixed layer.

“Ventilation Rate” (VR) equals the product of the two (knotfeet or m*m/s) and represents the ability of the boundary layer to get rid of the smoke. When VR values are low, there is not much mixing potential and surface air quality suffers. When VR values are consistently low (day and night), it is possible to “smoke in” large areas for several days.

Ventilation Rate (m*m /s) = Mixing Height (m) x Transport Wind (m/s)

	Smoke Dispersal	Ventilation Rate		
		knot-feet	m/s-m	mph-ft
	Excellent	≥ 150, 000	≥ 23,445	≥ 172,086
	Very Good	100,000 - 149,999	15,630 - 23,444	114,724 - 172,085
	Good	60,000 - 99,999	9,378 - 15,629	68,835 - 114,723
	Fair	40,000 - 59,999	6,252 - 9,377	45,890 - 68,834
	Poor	< 40,000	< 6,252	< 45,890

Partial Table Source: https://www.weather.gov/sgf/firewx_smoke_dispersal

Typically this chart is used with afternoon ventilation rate values (using afternoon mixing heights, after any surface temperature inversion has dissipated). Note that on nights with surface temperature inversions, the mixing height goes to zero and so does the ventilation rate.

Minimum Distances to Smoke Sensitive Areas

General Fuel Category	Daily Fire Size (acres)*	Dispersion Category	Minimum Distance to Downwind Smoke Sensitive Areas (miles)
Single large pile or Scattered small piled fuels	NA	POOR	0.25
	NA	FAIR or BETTER	No limitation
Grass or Leaf litter	< 50	POOR	0.25
	< 50	FAIR or BETTER	No limitation
	50 - 150	POOR	No burning
	50 - 150	FAIR or BETTER	No limitation
	150 - 500	POOR	No burning
	150 - 500	FAIR	0.25
	150 - 500	GOOD or BETTER	No limitation
	500+	POOR	No burning
	500+	FAIR	0.75
	500+	GOOD	0.50
	500+	EXCELLENT	0.25
Timber, slash, or piled fuels	< 50	POOR	No burning (See above exception for pile(s))
	< 50	FAIR	0.50
	< 50	GOOD or BETTER	No limitation
	50 - 150	POOR	No burning
	50 - 150	FAIR	0.50
	50 - 150	GOOD or BETTER	No limitation
	150 - 500	POOR	No burning
	150 - 500	FAIR	0.75
	150 - 500	GOOD	0.50
	150 - 500	EXCELLENT	0.25
	500+	POOR	No burning
	500+	FAIR	1.0
	500+	GOOD	0.75
	500+	EXCELLENT	0.50

*Assumes no more than one unit within a 5-mile radius.

Note: On Poor Category days no burning is suggested within ¼ mile of any downwind smoke sensitive area and is not recommended in general.

Table Source: Illinois Smoke Management Plan 2009