Flint Hills Wildland Fire Update

March 7, 2025

The following information on the Flint Hills wildland fires is provided weekly to keep stakeholders up to date on fires, smoke, and air quality.

Kansas Department of Health and Environment

https://www.KSFire.org/

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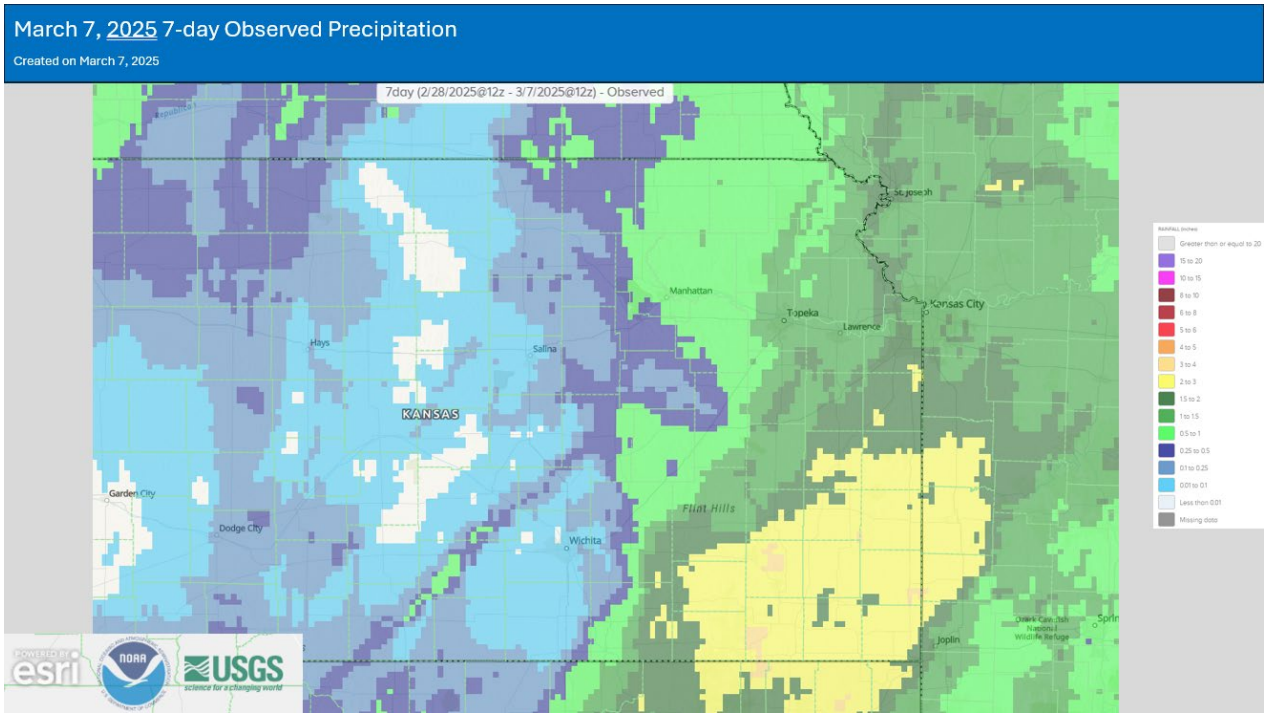
This website was developed as part of the development of the Kansas Flint Hills Smoke Management Plan. Kansas State University hosts the webpage, and it includes important information for ranchers and others who might be interested in the Flint Hills. It provides training, regulations, policies, publications, a modeling tool and other links to guide people looking for information on smoke management. The development of the Flint Hills Smoke Management Plan is an attempt to balance the need for prescribed fire in the Flint Hills with the need for clean air in downwind areas.

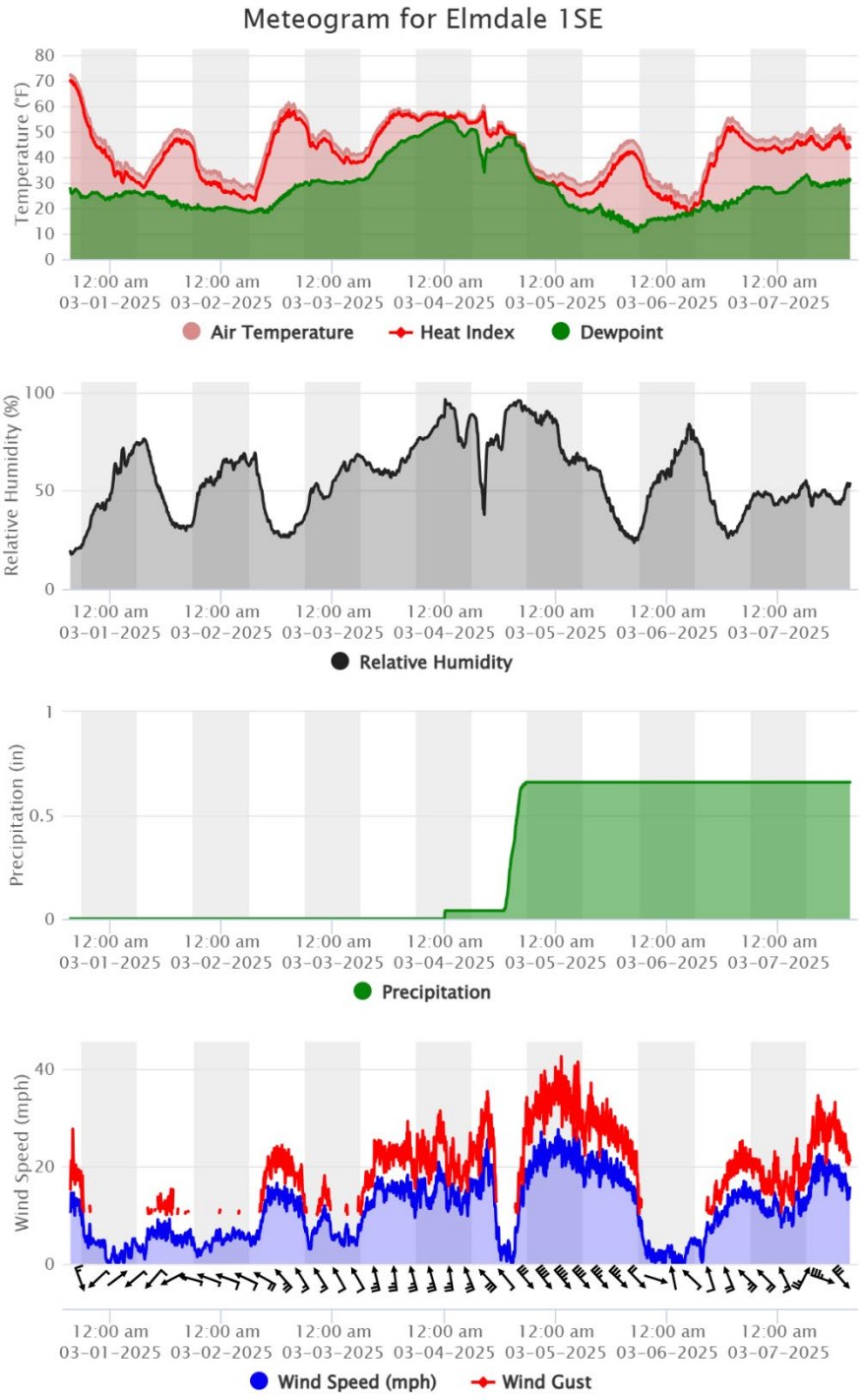
Meteorology

Temperatures in the 70s and gusty west to northwest winds were observed last Friday (February 28) across the region with wind gusts up to 35 mph. Lighter northeasterly winds alongside cooler temperatures (40s) existed for Saturday (March 1). Breezy conditions and temperatures near 60° returned for Sunday (March 2). Cloudy skies moved through on Monday (March 3) but temperatures remained in the upper 50s to low 60s with gusty SE winds. Some light rain occurred early Tuesday (March 4) before a very strong system moved across Kansas with rain changing to snow and blizzard conditions overnight with winds gusty to near 70 mph. Some areas of SE Kansas received over 2 inches rain. Strong winds continued through most of the day on Wednesday (March 5) with sunny skies by afternoon with high temperatures near 40°. Southeast winds 10-20 mph and near normal temperatures under sunny skies occurred on Thursday (March 6).

Precipitation



NOAA/NWS Observed Total Precip. for Feb 28-March 7, 2025.



7-day (Feb 28-March 7, 2025) Observed Weather from the Kansas Mesonet station near Elmdale, Kansas (https://mesonet.k-state.edu/)

Fire, Smoke, and Air Quality

For the period of February 28- March 6, 2025, there were no air quality exceedances that were potentially influenced by prescribed fire within the Flint Hills.

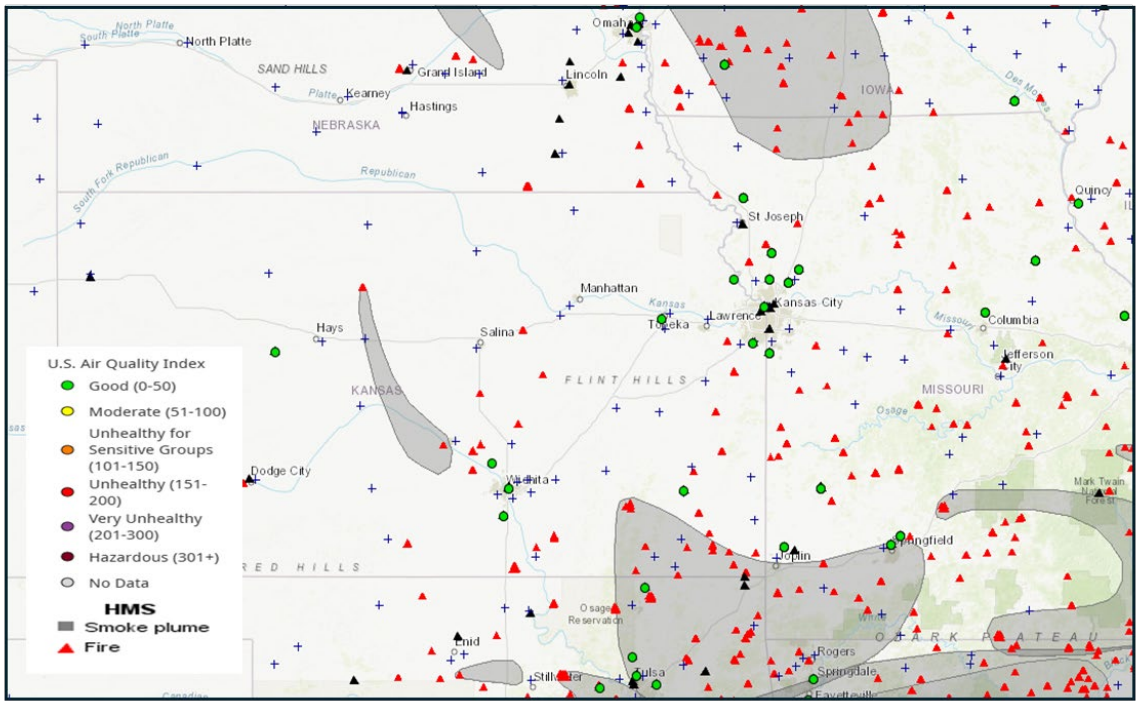
Ozone: Preliminary data indicates no exceedances of the NAAQS daily 8-hour average maximum of 70 ppb.

$PM_{2.5}$: Preliminary data indicates no exceedances of the NAAQS daily 24-hour average maximum of 35 µg/m^3. Note**Two likely exceedances occurred at the Oklahoma McAlester site on February 28 (44.9 µg/m^3) and March 2 (51.3 µg/m^3) from fires burning in Southeast Oklahoma and not the Flint Hills.

Prescribed fire activity was limited on Friday (February 28) across Kansas with most of the fires over southern and eastern Oklahoma, with smoke plumes mainly over that area but a few others scattered across the area. Smoke over SE Oklahoma led to Unhealthy air quality for the McAlester monitoring site. Light smoke was observed on Saturday (March 1) across the far southern Flint Hills mainly from fires in Oklahoma and Arkansas. Fire activity was scattered across the area on Sunday (March 2), with smoke plumes located over parts of central and western Kansas that led to elevated (moderate) $PM_{2.5}$ AQI values in those areas. Although the plume wasn't identified over eastern Kansas, Topeka also saw a moderate $PM_{2.5}$ AQI value. On Monday (March 3) cloudy skies prevailed and although the number of fires decreased, lingering smoke caused moderate $PM_{2.5}$ AQI values. On Tuesday (March 4), light rain fell in the morning, then a very strong system moved across the area bringing rain, then snow and blizzard like conditions with winds more than 65 mph. There was no fire activity on Wednesday (March 5) as winds continued strong from the north around 30-40 mph. With clear skies and lighter winds, prescribed fire activity was again seen across Oklahoma on Thursday (March 6) but PM and Ozone AQI values remained good across the area.

The following pages have two maps for each day; One showing the 24-hour average Air Quality Index category for $PM_{2.5}$ and the other showing the 8-hour average maximum Air Quality Index category for Ozone from regulatory air quality monitors in the region. Both maps show fires and smoke as analyzed by NOAA Hazard Mapping Services.

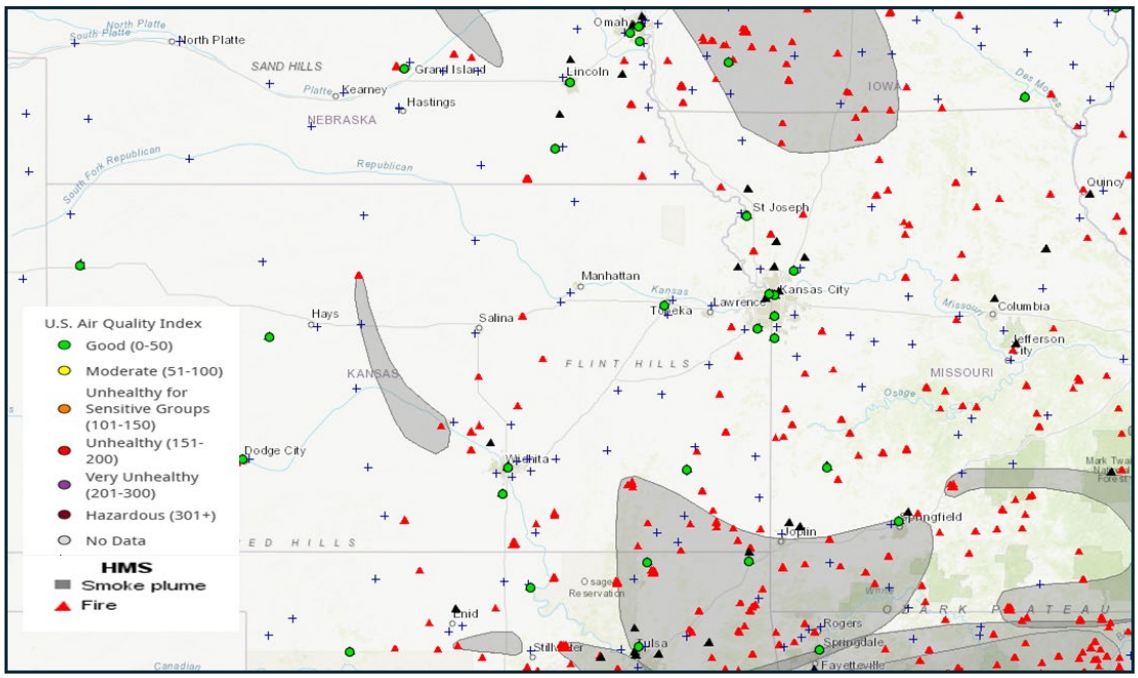
Fire, Smoke and Ozone Air Quality Index
February 28, 2025



Map: Douglas Watson, KDHE Bureau of Air

Fire and Smoke Data: NOAA HMS Fire and Smoke Product; Air Quality Data; EPA AirNow

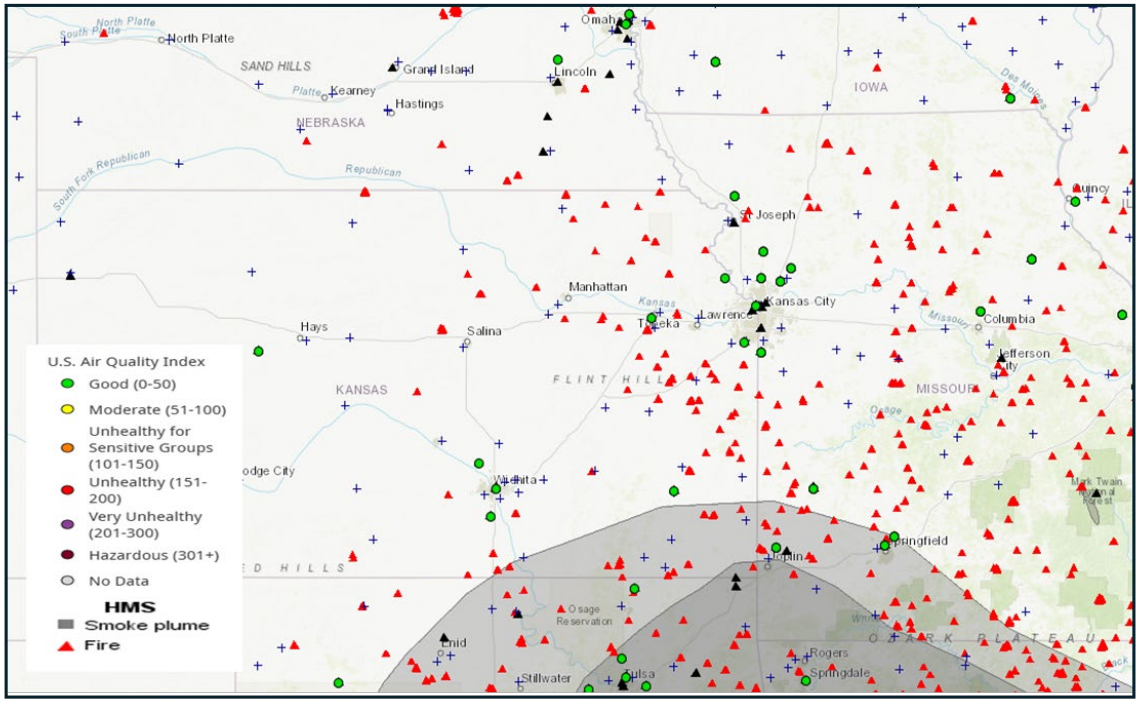
Fire, Smoke and $PM_{2.5}$ Air Quality Index
February 28, 2025



Map: Douglas Watson, KDHE Bureau of Air

Fire and Smoke Data: NOAA HMS Fire and Smoke Product; Air Quality Data; EPA AirNow

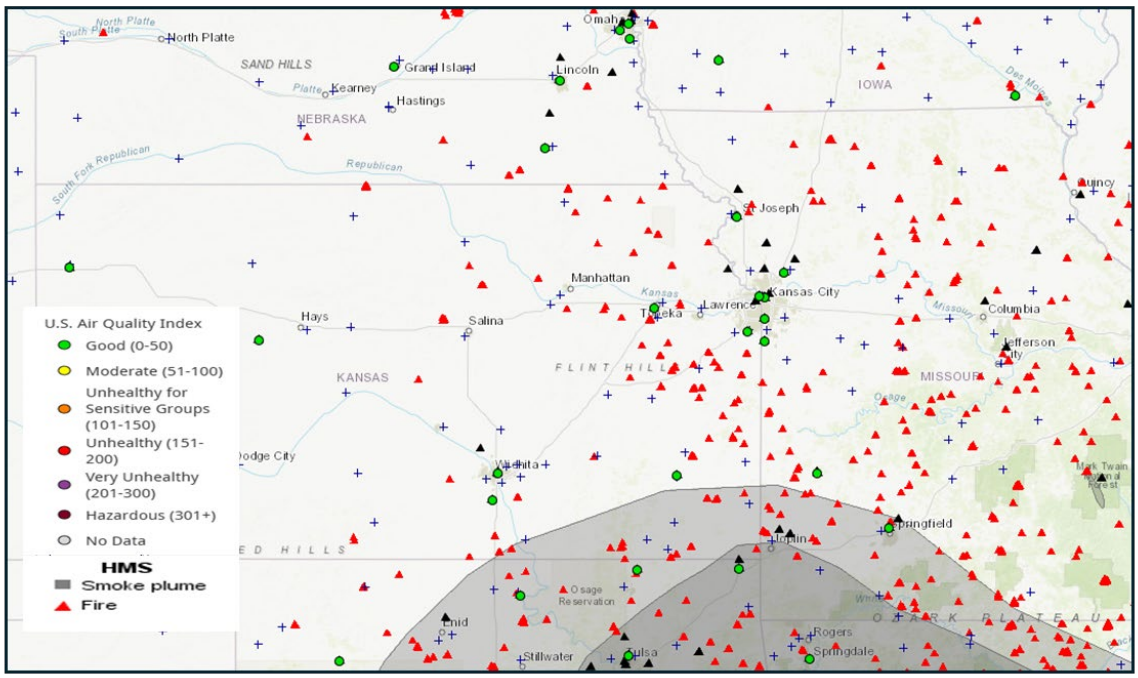
Fire, Smoke and Ozone Air Quality Index
March 1, 2025



Map: Douglas Watson, KDHE Bureau of Air

Fire and Smoke Data: NOAA HMS Fire and Smoke Product; Air Quality Data; EPA AirNow

Fire, Smoke and $PM_{2.5}$ Air Quality Index
March 1, 2025



Map: Douglas Watson, KDHE Bureau of Air

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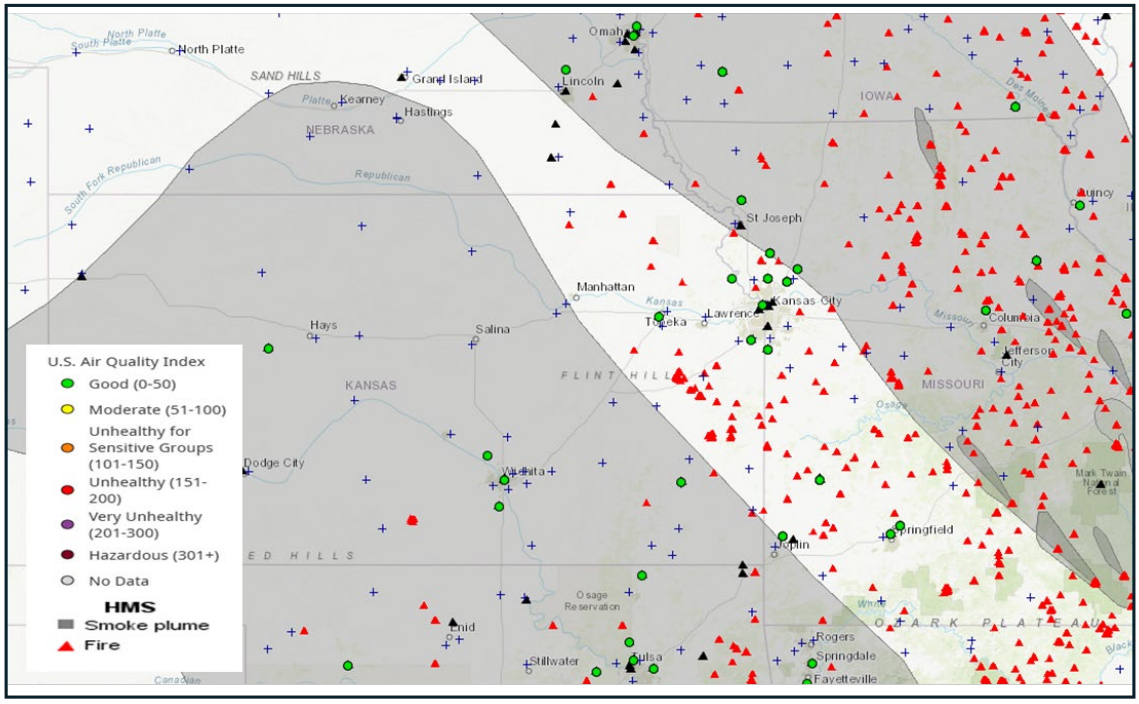
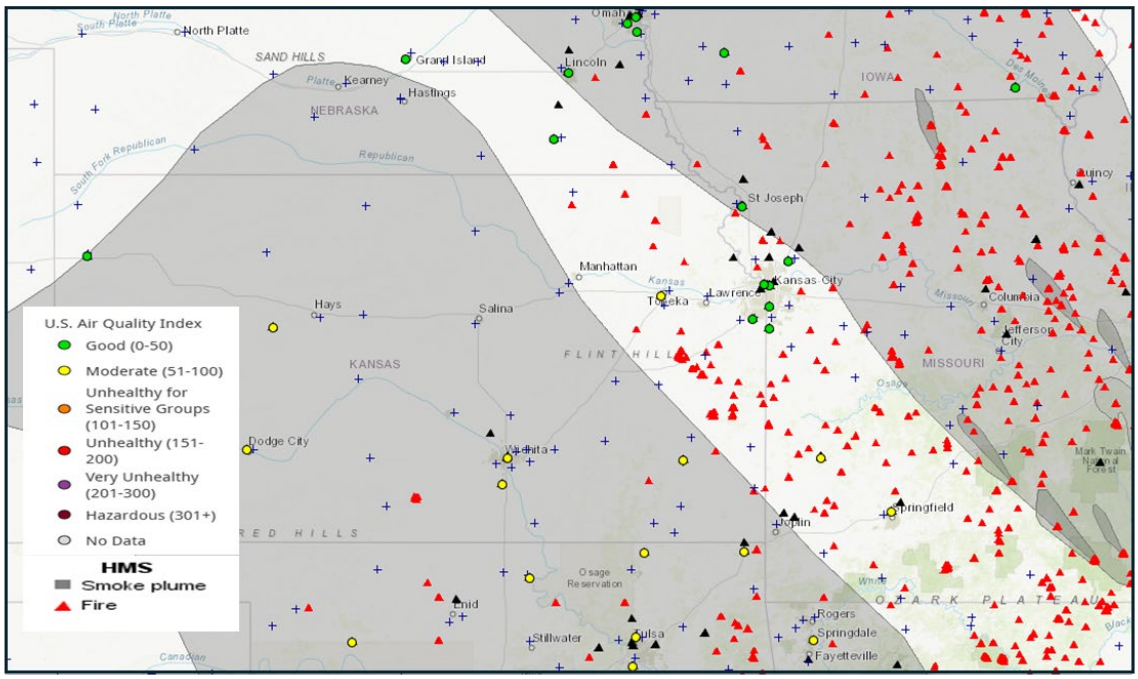
Fire, Smoke and Ozone Air Quality Index
March 2, 2025



Map: Douglas Watson, KDHE Bureau of Air

Fire and Smoke Data: NOAA HMS Fire and Smoke Product; Air Quality Data; EPA AirNow

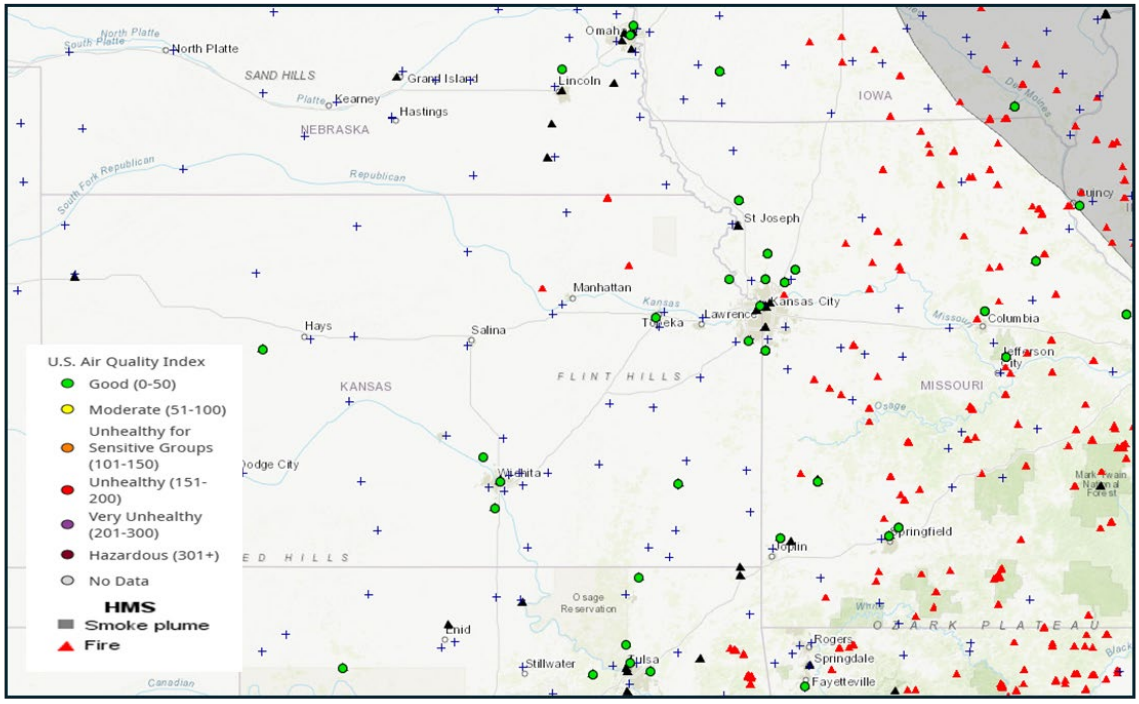
Fire, Smoke and $PM_{2.5}$ Air Quality Index
March 2, 2025



Map: Douglas Watson, KDHE Bureau of Air

Fire and Smoke Data: NOAA HMS Fire and Smoke Product; Air Quality Data; EPA AirNow

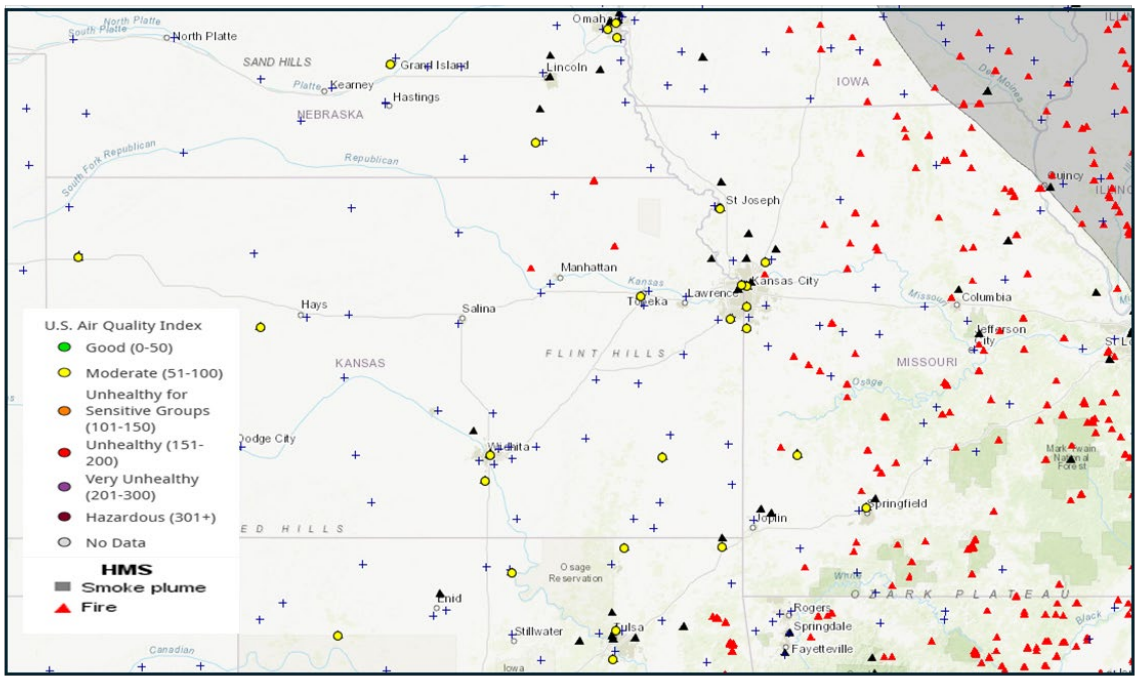
Fire, Smoke and Ozone Air Quality Index
March 3, 2025



Map: Douglas Watson, KDHE Bureau of Air

Fire and Smoke Data: NOAA HMS Fire and Smoke Product; Air Quality Data; EPA AirNow

Fire, Smoke and $PM_{2.5}$ Air Quality Index
March 3, 2025



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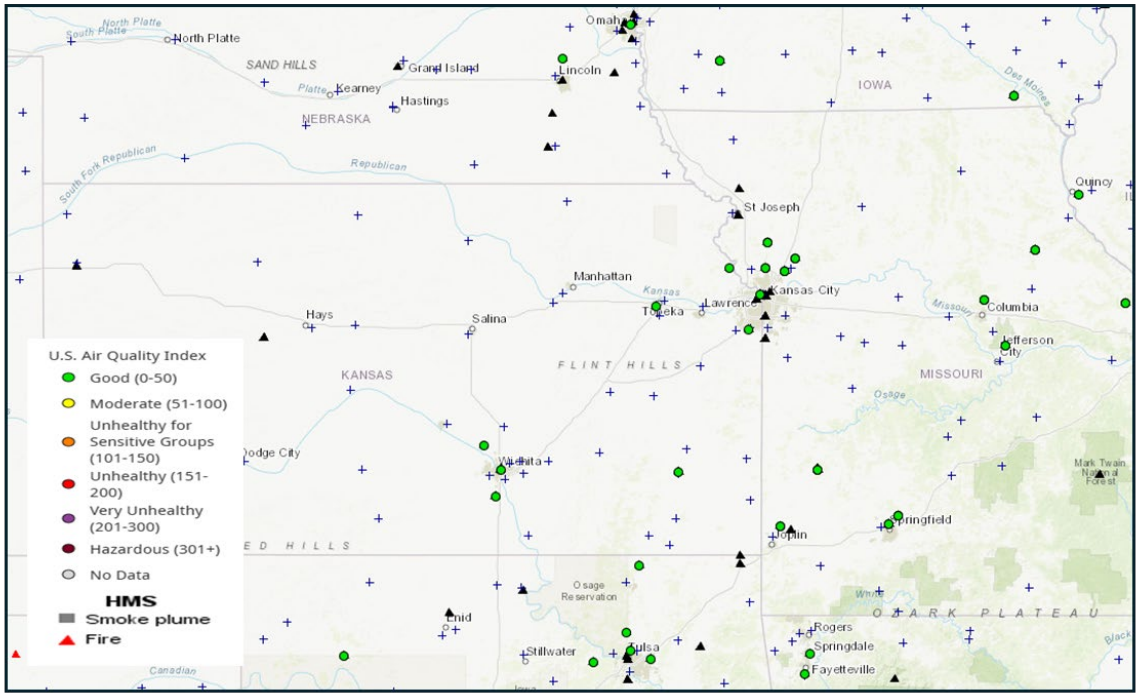
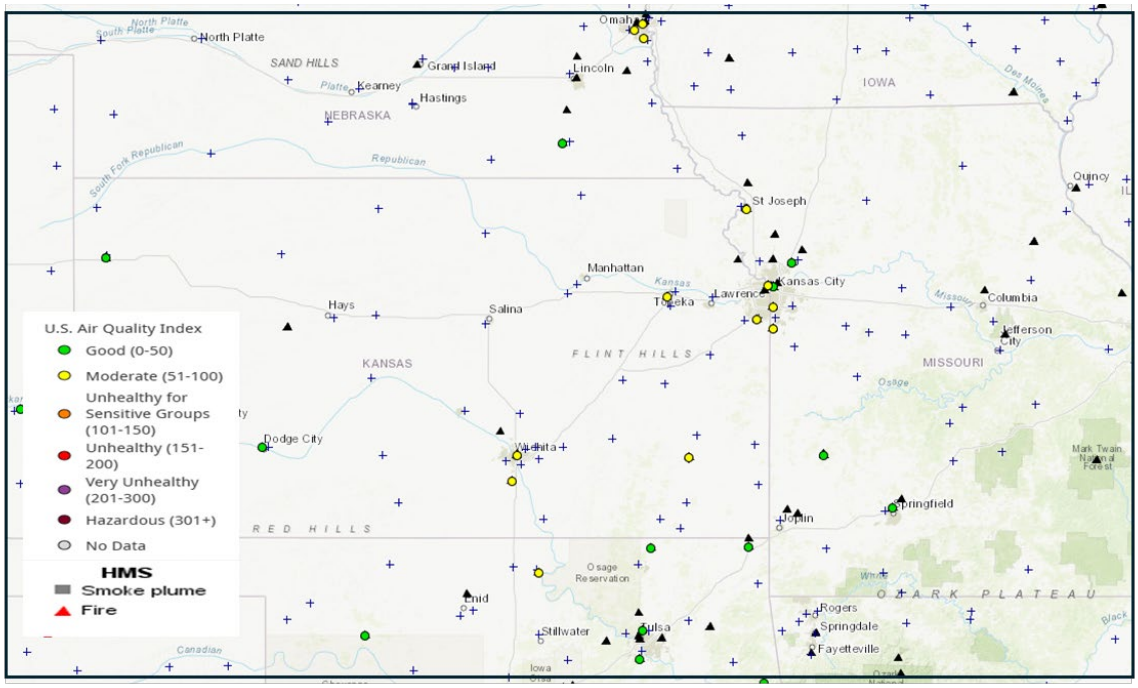
Fire, Smoke and Ozone Air Quality Index
March 4, 2025



Map: Douglas Watson, KDHE Bureau of Air

Fire and Smoke Data: NOAA HMS Fire and Smoke Product; Air Quality Data; EPA AirNow

Fire, Smoke and $PM_{2.5}$ Air Quality Index
March 4, 2025



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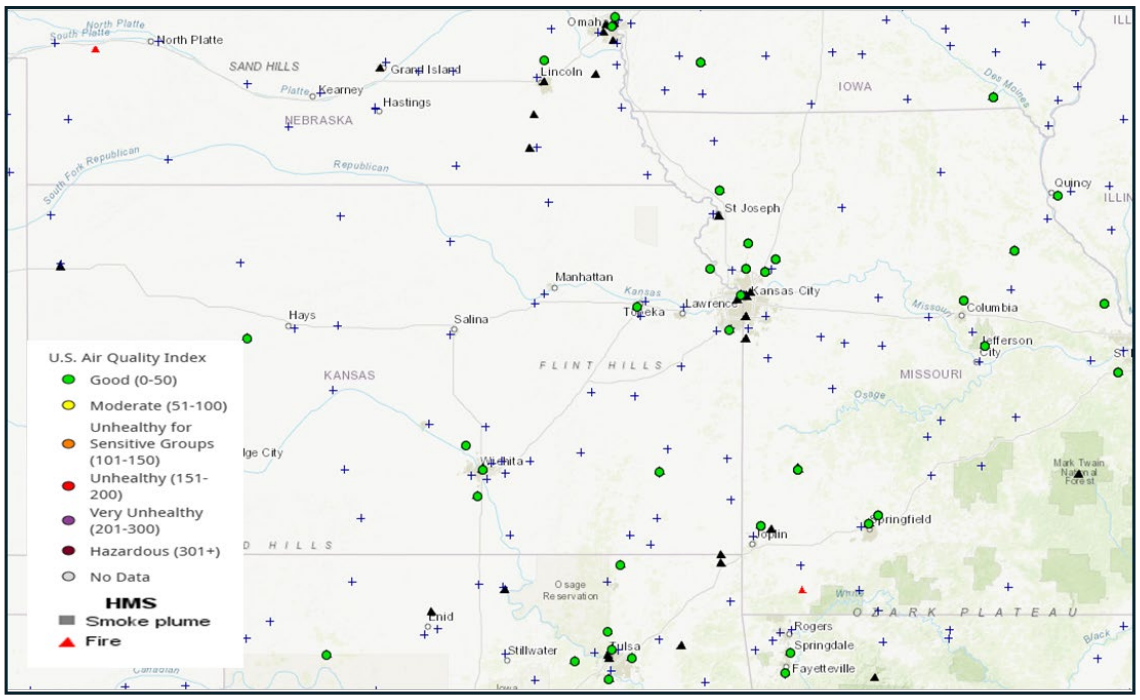
Fire, Smoke and Ozone Air Quality Index
March 5, 2025



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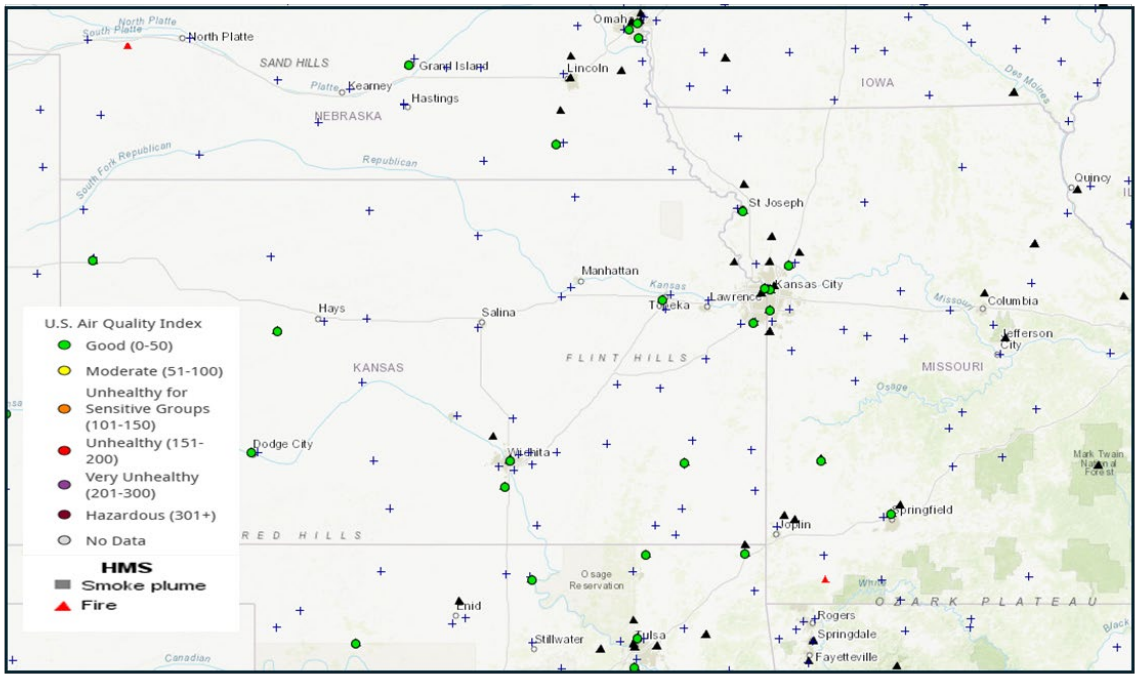
Fire, Smoke and $PM_{2.5}$ Air Quality Index
March 5, 2025



Map: Douglas Watson, KDHE Bureau of Air

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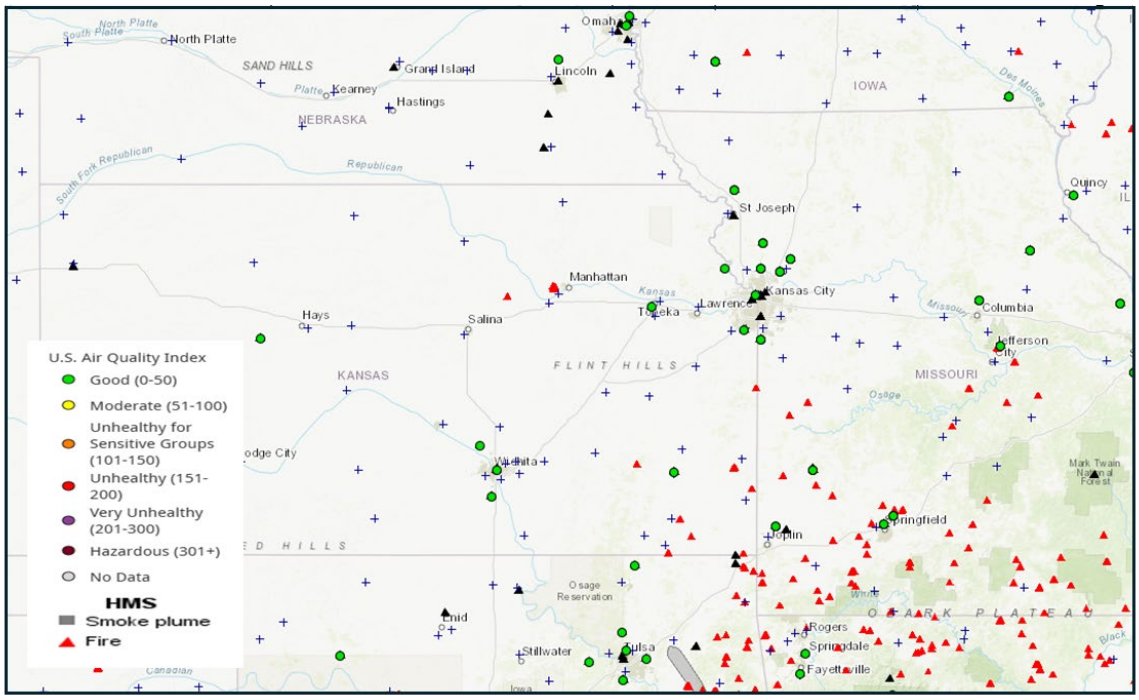
Fire, Smoke and Ozone Air Quality Index
March 6, 2025



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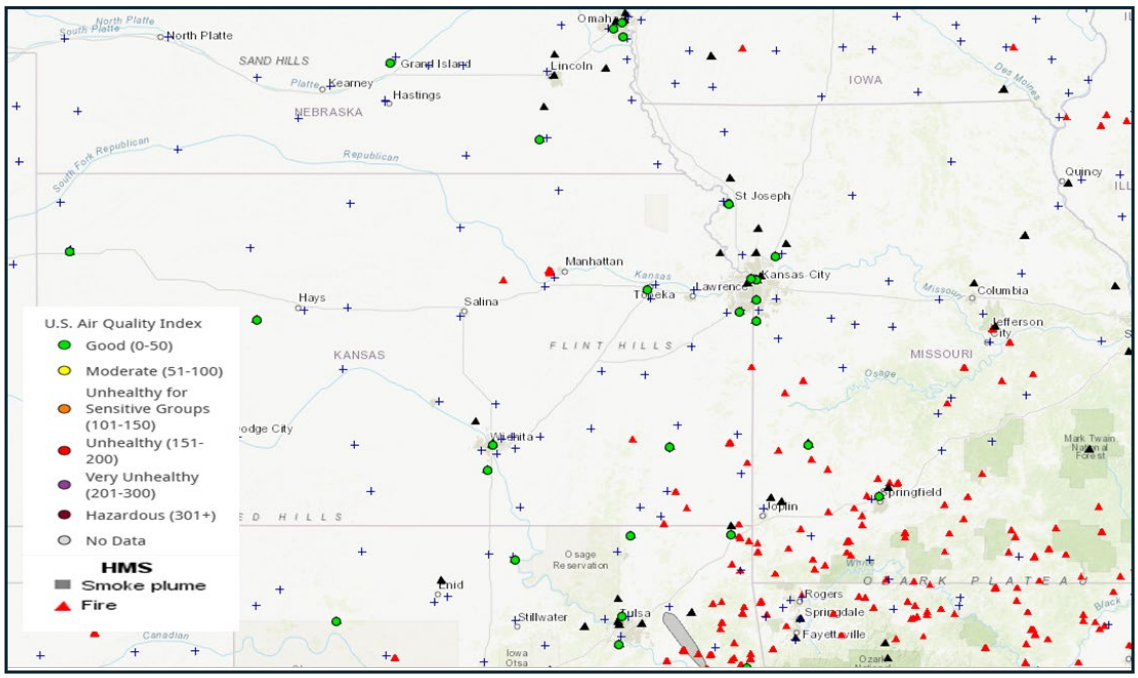
Fire, Smoke and $PM_{2.5}$ Air Quality Index
March 6, 2025



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Upcoming Look at Fires and Smoke

Low pressure and a cold front pushed across most of the Flint Hills today (Friday) with breezy to windy conditions ahead of the front. With the exit of this system, lighter winds will be the rule this weekend which may lend itself to more prescribed fires across the region. Winds should mainly be out of the north on Saturday and more from the west on Sunday. Very high fire danger is expected to return to large portions of the forecast area Monday and Tuesday as unseasonably warm temperatures, gusty winds, and low RH values are forecast for both days. Highs should reach the low to mid 70s. The rest of the week looks dry with temperatures in the upper 60s to lower 70s

Ideal Weather Conditions for Prescribed Burning

******This Graphic is Currently Unavailable from the NWS******

Current National Weather Service forecast for the approximate center of the Flint Hills showing when conditions may be most favorable for wildland burning as described at KSFire.org. Conditions are most favorable when each parameter has a colored boxplot displayed.

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For more information, contact:

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